

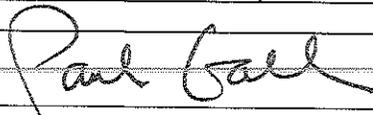
**Cover Document
Confidential Information**

**Application for NSR Permit and Title V Permit Revision
American Woodmark Corporation, South Branch
Moorefield, West Virginia
August Mack Project Number JO1413.253**

Company Name	American Woodmark Corporation, South Branch	Responsible Official		
Company Address	587 Robert C. Byrd Industrial Park Road, Moorefield, WV 26836	Confidential Information Designee in State of West Virginia	Name	Paul Gall
			Title	Plant Manager
Person/Title Submitting Confidential Information	Todd Regula		Address	587 Robert C. Byrd Industrial Park Road, Moorefield, WV 26836
	Corporate Environmental, Health, and Safety Manager		Phone	(304) 530-1100

Reason for Submittal of Confidential Information: The confidential information is being submitted as a part of the application for NSR Permit and Title V Permit revision.

Identification of Confidential Information	Rationale for Confidential Claim	Confidential Treatment Time Period
Attachment C - Installation and Start Up Schedule	Disclosure of the confidential information is likely to cause substantial harm to American Woodmark Corporation's competitive position.	Permanently
Attachment E - Plot Plan	Disclosure of the confidential information is likely to cause substantial harm to American Woodmark Corporation's competitive position.	Permanently
Attachment G - Process Description	Disclosure of the confidential information is likely to cause substantial harm to American Woodmark Corporation's competitive position.	Permanently
Attachment I - Emission Units Table	Disclosure of the confidential information is likely to cause substantial harm to American Woodmark Corporation's competitive position.	Permanently

Responsible Official Signature:	
Responsible Official Title:	Plant Manager
Date Signed:	2/4/15



717.399.9587 • www.augustmack.com
941 Wheatland Avenue, Suite 202 • Lancaster, Pennsylvania 17603

February 4, 2015

John A. Benedict, Director
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

**Re: Application for NSR Permit and Title V Permit Revision
American Woodmark Corporation, South Branch
Moorefield, West Virginia
August Mack Project Number JO1413.253**

Dear Mr. Benedict:

August Mack Environmental, Inc. (August Mack) was retained by American Woodmark Corporation, South Branch (American Woodmark) to prepare the enclosed Application for NSR Permit and Title V Revision for the American Woodmark facility located in Moorefield, West Virginia. The purpose of this application is to have the West Virginia Department of Environmental Protection (WVDEP) issue a modification to allow the construction and operation of the proposed emissions units, baghouses and thermal oxidizer. In addition, American Woodmark is requesting an increase in the annual material throughput for the manual spray booth (Emission Point E12) and the waste-solvent recovery still (Emission Point E11) currently included in the facility's permit. Enclosed is one application packet consisting of three copies of the application, each of which include one disc, and one set of hard copies of the forms specified in the application guidance.

American Woodmark submitted the required notice of application to the Moorefield Examiner and the notice was published on January 28, 2015. Since the notice was published, revisions have been made to the emission calculations, increasing the overall emissions detailed in the application. Therefore, American Woodmark has submitted an updated notice of application to the Moorefield Examiner. The affidavit for the updated notice will be submitted upon receipt.



SOURCE DESCRIPTION

American Woodmark manufactures and finishes wood doors and frames for final assembly into finished kitchen and vanity cabinets. American Woodmark plans to install a woodworking operation and a finishing line. The woodworking operation consists of twenty-one (21) woodworking machines, to be installed in 2015, throughout the facility. The pollutants emitted from the woodworking operation include PM, PM10 and PM2.5. The PM, PM10 and PM2.5 from the woodworking operation will be controlled by the existing baghouses and two (2) new baghouses (BH9, BH10) with the removal efficiency of 99.9%. The PM, PM10 and PM2.5 controlled emissions from BH9 and BH 10 are estimated to be a total of 40.54 tons per year.

The finishing line operation consists of twenty-three (23) machines, to be installed in 2015, throughout the facility. The pollutants emitted from the finishing line operation include PM, PM10, PM2.5, volatile organic compounds (VOCs) and hazardous air pollutants (HAPs). The PM, PM10 and PM2.5 from the finishing line operation will be controlled by the existing baghouses and one (1) new baghouse (BH11) with the removal efficiency of 99.9%. The PM, PM10 and PM2.5 controlled emissions from BH11 is estimated to be 20.27 tons per year from the woodworking operations associated with the new finishing line and 0.048 tons per year associated with the finishing line coating operations. The VOC and HAP emissions from the finishing line operation will be controlled by the existing thermal oxidizers and one (1) new thermal oxidizer (RTO3) with a control efficiency of 95% and a destruction efficiency of 98.0%. The VOC and HAP controlled emissions from RTO3 are estimated to be 73.31 tons per year and 13.8 tons per year, respectively.

American Woodmark is requesting an increase in the annual and hourly material throughputs for the waste solvent recovery still currently included in the facility's permit. Currently, the hourly throughput limitation for the still is 1.71 gallons per hour and the annual throughput is 14,980 gallons per year. American Woodmark would like to increase the hourly throughput in gallons per hour by 3.42 gallons per hour for an hourly throughput of 5.13 gallons per hour, increasing the annual throughput to approximately 44,940 gallons per year (an overall increase of 29,959 gallons per year). The proposed still is totally enclosed and will only open approximately 5% of the time. The primary pollutants emitted from the still are VOC and HAP. The potential VOC and HAP (xylene) emissions from the requested increase were determined by using the increased hourly throughput of waste solvent, the density of the worst case solvent (xylene), one hundred percent (100%) flash-off, an emission factor of five percent (5%) fugitive emissions, and 8,760 hours of operation. The VOC and single HAP potential emissions from the increase request are estimated to be 5.37 tons per year, respectively. The still is uncontrolled.

American Woodmark is requesting an increase in the overall VOC and HAP emissions from the manual spray booth (Emission Point E12) onsite from 0.04 pounds per hour for VOC and HAPs, respectively, to 4.67 pounds per hour for VOCs and HAPs, respectively. Annual emissions increase from 0.13 tons per year for VOCs and HAPs, respectively, to 14.6 tons per year for VOCs and HAPs, respectively. When the manual spray booth was initially installed, the booth was being used for touch-up and repairs. American Woodmark now wishes to use the manual spray booth as a part of the manufacturing process. Additionally, American Woodmark is requesting the manual spray booth (Emission Point E12) be included with the thermal oxidizers (Emission Points E9, E10 and E22) and not singled out in the permit as its own emission source as the VOC and HAP emission from the manual spray booth are controlled by the thermal oxidizers onsite and are not emitted directly from the manual spray booth.

American Woodmark is requesting that the plant-wide VOC Prevention of Significant Deterioration (PSD) minor source limit of 249.4 tpy established in the current permit RO30-03100030-2011 be maintained after this modification.

POTENTIAL TO EMIT CALCULATIONS

The potential emissions from the source were calculated by performing engineering or mass balance calculations. The engineering calculations involved utilizing the design air flow rates of each of the three (3) new baghouses, the design grain loadings for each baghouse, an overall control efficiency of 99.9%, and assuming 8,760 hours of operation per year. The engineering calculations involved for the new thermal oxidizer involved projected material throughput, an overall destruction efficiency of 93.1%, and assuming 8,760 hours of operation per year. Engineering calculations for the manual spray booth throughput increase are included in the calculations for the thermal oxidizer. The mass balance calculations for the requested material throughput for the still were performed assuming that all pollutants introduced in the process were emitted. The waste-solvent still is totally enclosed and only open 5% of the time; therefore, total emissions were calculated based upon 438 hours of operation per year. A summary of the potential emissions due to the modification is provided in Table 1. A summary of emissions after controls is provided in Table 2. Potential to emit calculations are presented in Attachment N of the permit application.

TABLE 1
Potential to Emit (tons/year)

Emission Unit	PM	PM ₁₀	PM _{2.5}	SO _x	NO _x	VOC	CO	GHGs/ CO _{2e}	Single HAP	Combined HAP
Woodworking Operations Baghouse BH9 (EP19)	20273.1	20273.1	20273.1	-	-	-	-	-	-	-
Woodworking Operations Baghouse BH10 (EP20)	20273.1	20273.1	20273.1	-	-	-	-	-	-	-
Woodworking Operations Associated with Finishing Line 3 Baghouse BH11 (EP21)	20273.1	20273.1	20273.1	-	-	-	-	-	-	-
Finishing Line 3 RTO3 (EP22)	84.6	84.6	84.6	-	-	1767.7	-	-	267.9 (Toluene)	281.6
Waste Solvent Recovery Still Increase	-	-	-	-	-	5.37	-	-	5.37 (Xylene)	5.37 (Xylene)
Natural Gas Combustion - RTO3	0.10	0.40	0.40	0.03	5.26	0.29	4.42	6345	1.8E-04 (Toluene)	0.10
Natural Gas Combustion - Insignificant Sources	0.03	0.14	0.14	0.011	1.80	0.10	1.51	2171	6.1E-05 (Toluene)	0.03
Totals	60904.2	60904.6	60904.6	0.042	7.05	1773.5	5.93	8516	273.2	287.1

Notes: PM = total particulate matter; PM10 = total particulate matter less than 10 microns in aerodynamic diameter;
 SO_x = sulfur oxides; NO_x = nitrogen oxides; VOC = volatile organic compounds; CO = carbon monoxide; GHGs =
 Greenhouse Gases; CO_{2e} = carbon dioxide equivalent; HAP = hazardous air pollutants.
 Emission totals may be slightly off due to decimal place rounding.

Limited emissions were calculated the same as described above except assuming 6,240 hours of operation per year for RTO3. In addition, the coating throughput for RTO3 was reduced by 20% in the actual emission calculations to account for historically demonstrated downtime.

TABLE 2
Actual Emissions After Control (tons/year)

Emission Unit	PM	PM ₁₀	PM _{2.5}	SO _x	NO _x	VOC	CO	GHGs/ CO ₂ e	Single HAP	Combined HAP
Woodworking Operations Baghouse BH9 (EP19)	20.27	20.27	20.27	-	-	-	-	-	-	-
Woodworking Operations Baghouse BH10 (EP20)	20.27	20.27	20.27	-	-	-	-	-	-	-
Woodworking Operations Associated with Finishing Line 3 Baghouse BH11 (EP21)	20.27	20.27	20.27	-	-	-	-	-	-	-
Finishing Line 3 RTO3 (EP22)	0.048	0.048	0.048	-	-	73.31	-	-	13.17 (Toluene)	13.8
Waste Solvent Recovery Still Increase	-	-	-	-	-	5.37	-	-	5.37 (Xylene)	5.37
Natural Gas Combustion - RTO3	0.10	0.40	0.40	0.03	5.26	0.29	4.42	6345	1.8E-4 (Toluene)	0.10
Natural Gas Combustion - Insignificant Sources	0.03	0.14	0.14	0.011	1.80	0.10	1.51	2171	6.1E-05 (Toluene)	0.03
Totals	61.00	61.40	61.40	0.042	7.05	79.1	5.93	8516	13.2	19.3

Notes: Emission totals may be slightly off due to decimal place rounding.

CONCLUSION

Based on the above information, American Woodmark is requesting that the WVDEP issue a Significant Modification to the Title V permit for the source.

If you have any questions or comments, or require additional information, please do not hesitate to contact us at 717.399.9587.

Sincerely,



Nicole Collett
Compliance Manager



Alic Bent
Senior Technical Engineer

Enclosure



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
 601 57th Street, SE
 Charleston, WV 25304
 (304) 926-0475
 www.dep.wv.gov/dag

**APPLICATION FOR NSR PERMIT
 AND
 TITLE V PERMIT REVISION
 (OPTIONAL)**

PLEASE CHECK ALL THAT APPLY TO NSR (45CSR13) (IF KNOWN):
 CONSTRUCTION MODIFICATION RELOCATION
 CLASS I ADMINISTRATIVE UPDATE TEMPORARY
 CLASS II ADMINISTRATIVE UPDATE AFTER-THE-FACT

PLEASE CHECK TYPE OF 45CSR30 (TITLE V) REVISION (IF ANY):
 ADMINISTRATIVE AMENDMENT MINOR MODIFICATION
 SIGNIFICANT MODIFICATION
 IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS ATTACHMENT S TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant (as registered with the WV Secretary of State's Office): American Woodmark Corporation		2. Federal Employer ID No. (FEIN): 541138147	
3. Name of facility (if different from above): South Branch		4. The applicant is the: <input type="checkbox"/> OWNER <input type="checkbox"/> OPERATOR <input checked="" type="checkbox"/> BOTH	
5A. Applicant's mailing address: 587 Robert C. Byrd Industrial Park Road, Moorefield, WV 26836		5B. Facility's present physical address: 587 Robert C. Byrd Industrial Park Road, Moorefield, WV 26836	
6. West Virginia Business Registration. Is the applicant a resident of the State of West Virginia? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO - If YES, provide a copy of the Certificate of Incorporation/Organization/Limited Partnership (one page) including any name change amendments or other Business Registration Certificate as Attachment A. - If NO, provide a copy of the Certificate of Authority/Authority of L.L.C./Registration (one page) including any name change amendments or other Business Certificate as Attachment A.			
7. If applicant is a subsidiary corporation, please provide the name of parent corporation:			
8. Does the applicant own, lease, have an option to buy or otherwise have control of the proposed site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO - If YES, please explain: The source is an existing source. American Woodmark owns the site property and all buildings and equipment. - If NO, you are not eligible for a permit for this source.			
9. Type of plant or facility (stationary source) to be constructed, modified, relocated, administratively updated or temporarily permitted (e.g., coal preparation plant, primary crusher, etc.): American Woodmark manufactures and finishes wood doors and frames for shipment to American Woodmark Corporation facilities across the nation for final assembly into finished kitchen and vanity cabinets		10. North American Industry Classification System (NAICS) code for the facility: 337110	

11A. DAQ Plant ID No. (for existing facilities only): 031-00030		11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): R30-03100030-2011	
<i>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</i>			
12A. <ul style="list-style-type: none"> - For Modifications, Administrative Updates or Temporary permits at an existing facility, please provide directions to the <i>present location</i> of the facility from the nearest state road; - For Construction or Relocation permits, please provide directions to the <i>proposed new site location</i> from the nearest state road. Include a MAP as Attachment B. <p>From the town of Moorefield at the intersection of Route 28 and Route 55, Take Route 55 East (Winchester Avenue) approximately 2.2 miles to Robert C. Byrd Industrial Park Road on the left. The plant is approximately 0.5 miles from Route 55 on Robert C. Byrd Industrial Park Road.</p>			
12.B. New site address (if applicable):		12C. Nearest city or town: Moorefield	12D. County: Hardy
12.E. UTM Northing (KM): 4,327.129		12F. UTM Easting (KM): 677.73	12G. UTM Zone: 17
13. Briefly describe the proposed change(s) at the facility: American Woodmark is requesting the addition of proposed emission units, baghouses, and RTO to the facility, as well as to request an increase in the material throughput limitations for the manual spray booth and waste-solvent recovery still located onsite.			
14A. Provide the date of anticipated installation or change: 06/01/2015 - If this is an After-The-Fact permit application, provide the date upon which the proposed change did happen: / /		14B. Date of anticipated Start-Up if a permit is granted: 07/01/2015	
14C. Provide a Schedule of the planned Installation of/Change to and Start-Up of each of the units proposed in this permit application as Attachment C (if more than one unit is involved).			
15. Provide maximum projected Operating Schedule of activity/activities outlined in this application: Hours Per Day 24 Days Per Week 7 Weeks Per Year 50			
16. Is demolition or physical renovation at an existing facility involved? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
17. Risk Management Plans. If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your Risk Management Plan (RMP) to U. S. EPA Region III.			
18. Regulatory Discussion. List all Federal and State air pollution control regulations that you believe are applicable to the proposed process (<i>if known</i>). A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance (<i>if known</i>). Provide this information as Attachment D .			
Section II. Additional attachments and supporting documents.			
19. Include a check payable to WVDEP – Division of Air Quality with the appropriate application fee (per 45CSR22 and 45CSR13).			
20. Include a Table of Contents as the first page of your application package.			

21. Provide a **Plot Plan**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to **Plot Plan Guidance**).

– Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F**.

23. Provide a **Process Description** as **Attachment G**.

– Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H**.

– For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I**.

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J**.

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K**.

28. Check all applicable **Emissions Unit Data Sheets** listed below:

<input type="checkbox"/> Bulk Liquid Transfer Operations	<input type="checkbox"/> Haul Road Emissions	<input type="checkbox"/> Quarry
<input type="checkbox"/> Chemical Processes	<input type="checkbox"/> Hot Mix Asphalt Plant	<input type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities
<input type="checkbox"/> Concrete Batch Plant	<input type="checkbox"/> Incinerator	<input type="checkbox"/> Storage Tanks
<input type="checkbox"/> Grey Iron and Steel Foundry	<input type="checkbox"/> Indirect Heat Exchanger	

General Emission Unit, specify Woodworking Baghouses (EP19, EP20, EP21), Waste Solvent Recovery Still (EP11), and Finishing Line 3Thermal Oxidizers (EP22).

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L**.

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

<input type="checkbox"/> Absorption Systems	<input checked="" type="checkbox"/> Baghouse	<input type="checkbox"/> Flare
<input type="checkbox"/> Adsorption Systems	<input type="checkbox"/> Condenser	<input type="checkbox"/> Mechanical Collector
<input checked="" type="checkbox"/> Afterburner	<input type="checkbox"/> Electrostatic Precipitator	<input type="checkbox"/> Wet Collecting System

Other Collectors, specify

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M**.

30. Provide all **Supporting Emissions Calculations** as **Attachment N**, or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O**.

➤ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and **Example Legal Advertisement** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33. **Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

YES NO

➤ If **YES**, identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's **"Precautionary Notice – Claims of Confidentiality"** guidance found in the **General Instructions** as **Attachment Q**.

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

- Authority of Corporation or Other Business Entity Authority of Partnership
 Authority of Governmental Agency Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R**.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned **Responsible Official** / **Authorized Representative**, hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE _____ DATE: _____
(Please use blue ink) (Please use blue ink)

35B. Printed name of signee: Paul Gall		35C. Title: Plant Manager
35D. E-mail:	35E. Phone: (304) 530-1100	35F. FAX: N/A
36A. Printed name of contact person (if different from above): Todd Regula, CSP		36B. Title: Corporate Environmental, Health, and Safety Manager
36C. E-mail: ERegula@Woodmark.com	36D. Phone: (540)665-9264	36E. FAX: (540)665-9202

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

<input checked="" type="checkbox"/> Attachment A: Business Certificate <input checked="" type="checkbox"/> Attachment B: Map(s) <input checked="" type="checkbox"/> Attachment C: Installation and Start Up Schedule <input checked="" type="checkbox"/> Attachment D: Regulatory Discussion <input checked="" type="checkbox"/> Attachment E: Plot Plan <input checked="" type="checkbox"/> Attachment F: Detailed Process Flow Diagram(s) <input checked="" type="checkbox"/> Attachment G: Process Description <input checked="" type="checkbox"/> Attachment H: Material Safety Data Sheets (MSDS) <input checked="" type="checkbox"/> Attachment I: Emission Units Table <input checked="" type="checkbox"/> Attachment J: Emission Points Data Summary Sheet	<input checked="" type="checkbox"/> Attachment K: Fugitive Emissions Data Summary Sheet <input checked="" type="checkbox"/> Attachment L: Emissions Unit Data Sheet(s) <input checked="" type="checkbox"/> Attachment M: Air Pollution Control Device Sheet(s) <input checked="" type="checkbox"/> Attachment N: Supporting Emissions Calculations <input checked="" type="checkbox"/> Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans <input checked="" type="checkbox"/> Attachment P: Public Notice <input type="checkbox"/> Attachment Q: Business Confidential Claims <input type="checkbox"/> Attachment R: Authority Forms <input checked="" type="checkbox"/> Attachment S: Title V Permit Revision Information <input checked="" type="checkbox"/> Application Fee
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Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY - IF THIS IS A TITLE V SOURCE:

- Forward 1 copy of the application to the Title V Permitting Group and:*
- For Title V Administrative Amendments:*
 - NSR permit writer should notify Title V permit writer of draft permit,*
- For Title V Minor Modifications:*
 - Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,*
 - NSR permit writer should notify Title V permit writer of draft permit.*
- For Title V Significant Modifications processed in parallel with NSR Permit revision:*
 - NSR permit writer should notify a Title V permit writer of draft permit,*
 - Public notice should reference both 45CSR13 and Title V permits,*
 - EPA has 45 day review period of a draft permit.*

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

ATTACHMENT A

Copy of Certificate of Incorporation/Organization/Limited Partnership

**WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION
CERTIFICATE**

ISSUED TO:
**AMERICAN WOODMARK CORPORATION
587 ROBERT C BYRD
MOOREFIELD, WV 26836-0000**

BUSINESS REGISTRATION ACCOUNT NUMBER: 1032-6655

This certificate is issued on: **07/7/2011**

*This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code*

*The person or organization identified on this certificate is registered
to conduct business in the State of West Virginia at the location above.*

**This certificate is not transferrable and must be displayed at the location for which issued.
This certificate shall be permanent until cessation of the business for which the certificate of registration
was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.**

**Change in name or change of location shall be considered a cessation of the business and a new
certificate shall be required.**

**TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of
this certificate displayed at every job site within West Virginia.**

ATTACHMENT B

Site Location Map and Directions

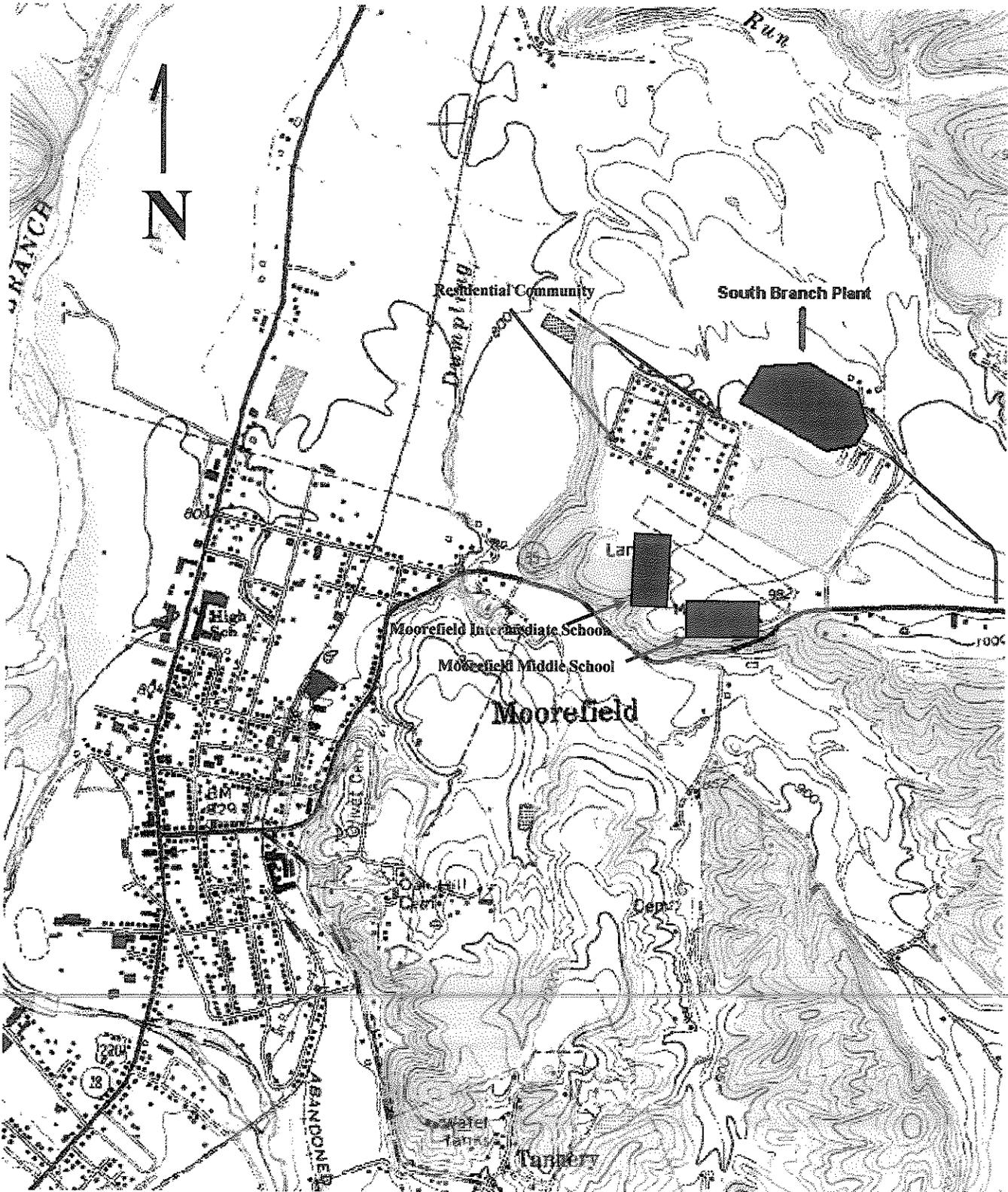


Directions to American Woodmark

From the town of Moorefield at the intersection of Route 28 and Route 55, take Route 55 East (Winchester Avenue) approximately 2.2 miles to Robert C. Byrd Industrial Park Road on the left. The plant is approximately 0.5 miles from Route 55 on Robert C. Byrd Industrial Park Road.

(See the following page for a map of the site location)

American Woodmark Corporation South Branch Facility



ATTACHMENT C

Installation and Start Up Schedule

CLAIMED CONFIDENTIAL 2/3/2015

REDACTED COPY - CLAIM OF CONFIDENTIALITY

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]		
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

ATTACHMENT D
Regulatory Discussion

1. American Woodmark is requesting that the three (3) new baghouses (Baghouse BH9, Emission Point E19), BaghouseBH10 (Emission Point E20) and Baghouse BH11, (Emission Point E21) controlling the proposed equipment be added to the existing permit, meeting the same state and federal requirements established for the other similar existing source baghouses.
2. American Woodmark is subject to 40 Code of Federal Regulations 63 Subpart JJ - National Emission Standards for Wood Furniture Manufacturing Operation. The facility will comply with the requirements set forth in the subpart.
3. American Woodmark is requesting that the plant-wide VOC Prevention of Significant Deterioration (PSD) minor source limit of 249.4 tpy established in the current permit RO30-03100030-2011 be maintained after this modification.

Limitations and Standards

45CSR13, R13-2571,4.1.11 and 4.1.36; 45CSR§7-4.1:

This rule will be used to establish the pound per hour and tons per year particulate matter emission limitations based on the design process weight rates of the new affected emission points (E19, E20 and E21) which will be controlled by baghouses BH9, BH10 and BH11.

45CSR13, R13-2571, 4.1.12:

This rule will require the emissions from existing emission points E1, E2, E3, E6, E7, E8, E17 and E18, as well as the new emission points E19, E20 and E21, be vented to and controlled by existing baghouses BH1, BH2, BH3, BH4, BH5, BH6, BH7 and BH8 or new proposed baghouses BH9, BH10 and BH11, prior to release to the atmosphere. In addition, the control devices will be required to be designed to achieve a maximum guaranteed control efficiency of 99.9% for particulate matter emissions.

45CSR13, R13-2571,4.1.3.:

This rule will establish the static pressure loss across existing baghouses BH1, BH2, BH3, BH4, BH5, BH6, BH7 and BH8 and the new proposed baghouses BH9, BH10 and BH11 at a range between 0.5 and 4.0 inches of water.

45CSR13, R13-2571, 4.1.34., and 45CSR§7-3.1:

This rule will establish an opacity limit from any process source operation of less than or equal to twenty (20) percent, except as noted in 45 CSR§§7-3.2, 3.3, 3.4, 3.5, 3.6, and 3.7.

45CSR§7-4.12:

This rule will establish the requirement that any stack serving any source operation or air pollution control equipment on any process source operation contain flow straightening devices or a vertical run of sufficient length to establish flow patterns consistent with acceptable stack sampling procedures.

Monitoring Requirements

45CSR13, R13-2571,4.2.2c.:

This rule will establish the requirement that the Permittee monitor and record the stabilized pressure loss across each of the baghouses, existing and new, on a daily basis.

45CSR§7A-2.1.a. and 45 CSR§30-5.1c.:

This rule will establish the requirement to conduct visible emission checks and/or opacity monitoring and recordkeeping. Specifically:

For the purpose of determining compliance with the opacity limit set forth in the permit, the Permittee shall conduct monthly visible emission checks and/or opacity monitoring and recordkeeping. The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in References 1 and 2 from 40 CFR 60, Appendix A, Method 22 or from the lecture portion of the 40 CFR 60, Appendix A, Method 9 certification course.

The Permittee shall conduct visible emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for existing emission points E1, E2, E3, E6, E7, E8, E17 and E18, as well as the new emission points E19, E20 and E21. The observations shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive test dates. These observations shall be conducted during periods of normal facility operation and appropriate weather observations for a sufficient time interval, but no less than one (1) minute, to

determine if the unit has visible emissions using procedures outlined in 40 CFR 60 Appendix A, Method 22.

If sources of visible emissions are identified during the survey, the permittee shall conduct an opacity evaluation in accordance with 45CSR7A, within twenty-four (24) hours. An evaluation based on 45 CSR7A shall not be required if the visible emission condition is corrected in a timely manner and units are operated at normal operating conditions with no visible emissions being observed.

Testing Requirements

45CSR§30-12.7.:

This rule will establish the requirement to develop and implement a program to annually verify and calibrate the differential pressure sensing devices.

4. American Woodmark is requesting that the new recuperative thermal oxidizer (RTO) (Emission Point E22) controlling the proposed finishing equipment be added to the existing permit, meeting the same state and federal requirements established for the other similar existing RTOs (Emission Points E9 and E10).

Limitations and Standards

45CSR13, R13-2571,4.1.16:

This rule will be used to establish the pound per hour emission limitations for each RTO and the combined pound per hour emission limitation for all three RTOs combined as required by the air pollutant loading to the control devices.

45CSR13, R13-2571,4.1.17:

This rule requires all emissions sources from all Finishing Operations (except for UV coating application and curing and water based paints), shall be vented to and controlled by a RTO, RTO1 (Emission Point E9), RTO2 (Emission Point E10) or RTO3 (Emission Point E22)

45CSR13, R13-2571, 4.1.18:

This rule requires the Regenerative Thermal Oxidizers, RTO1 (Emission Point E9) and RTO2 (Emission Point ID E10) and the new RTO3 (Emission Point E22) be designed to achieve a minimum guaranteed overall destruction efficiency of 95% for total VOC emissions.

45CSR13, R13-2571, 4.1.19., 40 C.F.R. § 63.804(f)(4)(iv)(A), and 45CSR34:

This rule requires the Regenerative Thermal Oxidizers RTO1 and RTO2, and the new RTO3 maintain a minimum combustion chamber temperature of 1,550°F on a three (3) hour rolling average during hours of production. The minimum combustion temperature shall be the operating parameter for continued compliance.

45CSR13, R13-2571, 4.1.20:

This rule requires the capture system pressure loss (the pressure difference between the building and the RTO inlet), maintain a minimum pressure drop of 0.004 inches of water on a three (3) hour rolling average while the plant is in production.

45CSR13, R13-2571, 4.1.21:

This rule requires the emission sources from all Finishing Operations shall be contained within a capture system that is designed to achieve a minimum guaranteed capture efficiency of 92% for total VOC emissions.

45CSR§10-4.1., and 45CSR13, R13-2571, 4.1.44:

This rule dictates no person shall cause, suffer, allow, or permit, the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations, except as provided in subdivisions 4.1.a. through 4.1.e. of rule 45CSR10.

45CSR§10-8.2.a., and 45CSR13, R13-2571, 4.1.45:

This rule requires indicates at the request of the Director the owner and/or operator of a source shall install such stack gas monitoring devices as the ~~Director deems necessary to determine compliance with the provisions of this~~ rule. The data from such devices shall be readily available at the source location or such other reasonable location that the Director may specify. At the request of the Director, or his or her duly authorized representative, such data shall be

made available for inspection or copying. Failure to promptly provide such data shall constitute a violation of this rule.

Monitoring Requirements

45CSR13, R13-2571, 4.2.2.d., 40 C.F.R. § 63.804(g)(4)(ii), and 45CSR34:

This rule requires the permittee to monitor and record the three (3) hour rolling average combustion chamber temperature in the Regenerative Thermal Oxidizers RTO1 and RTO2 (during hours of operation). Each RTO shall have a temperature monitoring device equipped with a continuous recorder. The temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

45CSR13, R13-2571, 4.2.2.e:

This rule requires the permittee to monitor and record the daily average capture system pressure loss, as measured at the inlet of the Regenerative Thermal Oxidizers RTO1 and RTO2 and the new RTO3.

45CSR§30-5.1.c:

This rule requires the permittee to monitor and track the usage of all materials and record such data in REGMET, or an equivalent emissions tracking system.

Testing Requirements

This section is reserved.

5. As a part of this permit modification, American Woodmark is requesting increases to the annual throughput and emissions for the manual spray booth (Emission Point E12) and the waste-solvent recovery still (Emission Point E11) ;however, since both the manual spray booth and the waste-solvent recovery still are included in the current Title V permit, there are no new regulatory requirements for these two sources.
-

Proposed Permit Language Changes

American Woodmark requests that the following applicable section of their operating permit be changed as follows for the three new baghouses.

4.0 Rotary Sanding Machines, Panel Cleaning Machines, Manual Sanding Conveyors, Wide Belt Sanding Machines, Denibbing Machines and Mill Area Equipment [emission point ID(s): E1, E2, E3, E6, E7, E8, E17, E18, E19, E20, E21]

4.1. Limitations and Standards

4.1.1. Maximum particulate matter emissions to the atmosphere from Emission Point ID# E1, E2, E3, E6, E7, E8, E17, ~~and~~ E18, E19, E20 and E21 shall not exceed the following limits:

Emission Point ID #	Source	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (tons/yr)
E1	Baghouse 1 (BH1)	0.59	2.60
E2	Baghouse 2 (BH2)	0.59	2.60
E3	Baghouse 3 (BH3)	1.19	5.21
E6	Baghouse 4 (BH4)	1.19	5.21
E7	Baghouse 5 (BH5)	0.37	1.62
E8	Baghouse 6 (BH6)	0.37	1.62
E17	Baghouse 7 (BH7)	4.29	18.77
E18	Baghouse 8 (BH8)	4.29	18.77
E19	Baghouse 9 (BH9)	Limit per 7-4.1	Emissions per 7-4.1
E20	Baghouse 10 BH(10)	Limit per 7-4.1	Emissions per 7-4.1
E21	Baghouse 11 BH(11)	Limit per 7-4.1	Emissions per 7-4.1

Compliance with the maximum hourly emission rates set forth in the table above ensures compliance with the less stringent limitation set forth by R13-2571, condition 4.1.36., and 45CSR§7-4.1.

~~[45CSR13, R13-2571, 4.1.11. and 4.1.36; 45CSR§7-4.1.]~~

4.1.2. Emissions from E1, E2, E3, E6, E7, E8, E17, ~~and~~ E18, E19, E20 and E21 shall be vented to and controlled by baghouses BH1, BH2, BH3, BH4, BH5, BH6, BH7, ~~and~~ BH8, and BH9, BH10 and BH11, prior to release to the atmosphere.

These control devices shall be designed to achieve a minimum guaranteed control efficiency of 99.9% for particulate matter emissions.

[45CSR13, R13-2571, 4.1.12.]

- 4.1.3. The stabilized static pressure loss across baghouses BH1, BH2, BH3, BH4, BH5, BH6, BH7, ~~and~~ BH8, B9, B10 and B11 shall remain between 0.5 to 4.0 inches of water.

[45CSR13, R13-2571, 4.1.13.]

- 4.1.4. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in 45CSR§§7- 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7.

[45CSR13, R13-2571, 4.1.34., and 45CSR§7-3.1.]

- 4.1.5. Any stack serving any process source operation or air pollution control equipment on any process source operation shall contain flow straightening devices or a vertical run of sufficient length to establish flow patterns consistent with acceptable stack sampling procedures.

[45CSR§7-4.12.]

4.2. Monitoring Requirements

- 4.2.1. The permittee shall daily monitor and record the stabilized static pressure loss across each of the baghouses BH1, BH2, BH3, BH4, BH5, BH6, BH7, ~~and~~ BH8, BH9, BH10 and BH11.

[45CSR13, R13-2571, 4.2.2.c.]

- 4.2.2. For the purpose of determining compliance with the opacity limit set forth in 4.1.4. in this permit, the permittee shall conduct monthly visible emission checks and/or opacity monitoring and recordkeeping. The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR60, Appendix A, Method 22 or from the lecture portion of the 40CFR60, Appendix A, Method 9 certification course.

The permittee shall conduct visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for emission points E1, E2, E3, E6, E7, E8, E17, ~~and~~ E18, E19, E20 and E21. The observations shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive test dates. These observations shall be conducted during periods of normal facility operation and appropriate weather conditions for a sufficient time interval, but no less than one (1) minute, to determine if the unit has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22. If sources of visible emissions are identified during the survey, the permittee shall conduct an opacity evaluation in accordance with 45CSR7A, within twenty-four (24) hours. An evaluation based upon 45CSR7A shall not be required if the visible emission condition is corrected in a timely manner and the units are operated at normal operating conditions with no visible emissions being observed.

[45CSR§7A-2.1.a. and 45CSR§30-5.1.c.]

4.3. Testing Requirements

- 4.3.1. The permittee shall develop and implement a program to annually verify and calibrate the differential pressure sensing devices.

[45CSR§30-12.7.]

American Woodmark requests that the following applicable section of their operating permit be changed as follows for the new RTO (Emission Point E22).

6.0 Recuperative Thermal Oxidizers [emission point ID(s): E9, E10, and E22]

6.1. Limitations and Standards

6.1.1. Emissions from the Regenerative Thermal Oxidizers RTO1 (Emission Point ID# E9) and RTO2 (Emission Point ID# E10), shall not exceed the following limits:

Pollutant	Emission Point ID# E9	Emission Point ID# E10	Emission Point ID# E22	Combined Emission Points ID# E9 and E10, and E22	Combined Emission Points ID# E9 and E10, and E22
	Maximum Hourly Emissions (lb/hr) *	Maximum Annual Emissions (ton/year) **			
Carbon Monoxide	1.46	1.46	1.46	1.46	6.41
Nitrogen Oxides	1.74	1.74	1.74	1.74	7.63
Sulfur Dioxide	0.01	0.01	0.01	0.01	0.05
Particulate Matter	1.16	1.16	1.16	1.16	3.78
Volatile Organic Compounds	69.37	69.37	80.0	104.0	216.56
Total Hazardous Air Pollutants	14.36	14.36	16.7	21.71	70.00

* RTO1 (Emission Point ID# E9), ~~and~~ RTO2 (Emission Point ID# E10) ~~and~~ RTO3 (Emission Point ID# 22) can be utilized alone or together, as required by the air pollutant loading to the control devices. The hourly emission limits above allow the permittee to operate either RTO1 or RTO2 or RTO3 alone, or both RTO1 ~~and~~ RTO2, ~~and~~ RTO3 at the same time. When RTO1, ~~and~~ RTO2, ~~and~~ RTO3 are operating at the same time, the hourly air pollutant emission rates from ~~both~~ Emission Point ID# E9, ~~and~~ E10, ~~and~~ E22 shall not exceed the Combined Emission Points ID# E9, ~~and~~ E10, ~~and~~ E22 Maximum Hourly Emissions limits listed above.

** The combined annual air pollutant emission rates from Emission Point ID E9 ~~and~~ E10, ~~and~~ E22 shall not exceed the Combined Emission Points ID# E9 ~~and~~ E10, ~~and~~ E22 Maximum Annual

Emissions limits listed above, whether the permittee operates RTO1 or RTO2 or RTO3 alone, or both RTO1, and RTO2, and RTO3 at the same time.

Compliance with the annual emission limits shall be determined using rolling yearly totals. A rolling yearly total shall mean the sum of the emissions at any given time for the previous twelve (12) consecutive months.

[45CSR13, R13-2571, 4.1.16.]

6.1.2. Emissions from the emission sources of all Finishing Operations (except for UV coating application and curing and water based paints), shall be vented to and controlled by a Regenerative Thermal Oxidizer, RTO1 (Emission Point ID# E9), ~~or~~ RTO2 (Emission Point ID# E10), or RTO3 (Emission Point ID# 22), prior to release to the atmosphere.

[45CSR13, R13-2571, 4.1.17.]

6.1.3. The Regenerative Thermal Oxidizers, RTO1 (Emission Point ID# E9), ~~or~~ RTO2 (Emission Point ID# E10), or RTO3 (Emission Point ID# 22)) shall be designed to achieve a minimum guaranteed overall destruction efficiency of 95% for Total Volatile Organic Compound (VOC) emissions.

[45CSR13, R13-2571, 4.1.18.]

6.1.4. The Regenerative Thermal Oxidizers RTO1 ~~and~~ RTO2 ~~and~~ RTO3 shall maintain a minimum combustion chamber temperature of 1,550°F on a three (3) hour rolling average during hours of production. The minimum combustion temperature shall be the operating parameter for continued compliance.

[45CSR13, R13-2571, 4.1.19., 40 C.F.R. § 63.804(f)(4)(iv)(A), and 45CSR34]

6.1.5. The capture system pressure loss (the pressure difference between the building and the RTO inlet), shall maintain a minimum pressure drop of 0.004 inches of water on a three(3) hour rolling average while the plant is in production.

[45CSR13, R13-2571, 4.1.20.]

6.1.6. The emission sources listed in 6.1.2. shall be contained within a capture system that is designed to achieve a minimum guaranteed capture efficiency of 92% for Total Volatile Organic Compound (VOC) emissions.

[45CSR13, R13-2571, 4.1.21.]

6.1.7. No person shall cause, suffer, allow, or permit, the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000

parts per million by volume from existing source operations, except as provided in subdivisions 4.1.a. through 4.1.e. of rule 45CSR10.

[45CSR§10-4.1., and 45CSR13, R13-2571, 4.1.44.]

6.1.8. At the request of the Director the owner and/or operator of a source shall install such stack gas monitoring devices as the Director deems necessary to determine compliance with the provisions of this rule. The data from such devices shall be readily available at the source location or such other reasonable location that the Director may specify. At the request of the Director, or his or her duly authorized representative, such data shall be made available for inspection or copying. Failure to promptly provide such data shall constitute a violation of this rule.

[45CSR§10-8.2.a., and 45CSR13, R13-2571, 4.1.45.]

6.2. Monitoring Requirements

6.2.1. The permittee shall monitor and record the three (3) hour rolling average combustion chamber temperature in the Regenerative Thermal Oxidizers RTO1 ~~and~~ RTO2 ~~and~~ RTO3 (during hours of operation). Each RTO shall have a temperature monitoring device equipped with a continuous recorder. The temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

[45CSR13, R13-2571, 4.2.2.d., 40 C.F.R. § 63.804(g)(4)(ii), and 45CSR34]

6.2.2. The permittee shall monitor and record the daily average capture system pressure loss, as measured at the inlet of the Regenerative Thermal Oxidizers RTO1 ~~and~~ RTO2 ~~and~~ RTO3.

[45CSR13, R13-2571, 4.2.2.e.]

6.2.3. The permittee shall monitor and track the usage of all materials and record such data in REGMET, or an equivalent emissions tracking system.

[45CSR§30-5.1.c.]

6.3. Testing Requirements

6.3.1. Reserved.

6.4. Recordkeeping Requirements

6.4.1. Records shall be maintained in accordance with permit condition 3.4.2. and certified records shall be made available to the Director of the Division of Air Quality or his/her duly authorized representative upon request.

[45CSR13, R13-2571, 4.2.2.]

6.5. Reporting Requirements

6.5.1. See 3.2.2. of this permit.

6.6. Compliance Plan

6.6.1. Reserved.

American Woodmark requests that the following applicable section of their operating permit be removed as the paint spray booth (Emission Point E12) is included in the Finishing Operations onsite and is controlled by the RTOs. As a part of this modification, American Woodmark requests the VOC and HAP yearly emission limit for the paint spray booth (Emission Point E12) be increased to 4.23 tons/yr. Emission calculations supporting this request can be found in Attachment O.

~~8.0 — Paint Spray Booth [emission point ID: E12]~~

~~8.1. — Limitations and Standards~~

~~8.1.1. The spray paint booth, E12, shall be designed operated and maintained such that emissions are routed to the plant RTOs. Accordingly, total emissions from the booth shall not exceed the following:~~

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Particulate Matter	0.16	0.49
Volatile Organic Compounds	0.04	0.13
Total Hazardous Air Pollutants	0.04	0.13

~~Compliance with the annual emission limits shall be determined using rolling yearly totals. A rolling yearly total shall mean the sum of the emissions at any given time for the previous twelve (12) consecutive months.~~

~~[45CSR13, R13-2571, 4.1.22.]~~

~~8.1.2. The permittee shall not use compounds containing more than 8.0 percent by weight of VOC for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, or metal filters, unless the spray booth is being refurbished. If the spray booth is being refurbished, that is the spray booth coating or other protective material used to cover the booth is being replaced, the affected source shall use no more than 1.0 gallon of organic solvent per booth to prepare the surface of the booth prior to applying the booth coating.~~

~~[40 C.F.R. § 63.803(f) and 45CSR34]~~

~~8.2. — Monitoring Requirements~~

~~8.2.1. The permittee shall monitor all incoming materials and record such data in REGMET, or an equivalent emissions tracking system.~~

~~[45CSR§30-5.1.c.]~~

~~8.3. Testing Requirements~~

~~8.3.1. Reserved.~~

~~8.4. Recordkeeping Requirements~~

~~8.4.1. Reserved.~~

~~8.5. Reporting Requirements~~

~~8.5.1. Reserved.~~

~~8.6. Compliance Plan~~

~~8.6.1. Reserved.~~

American Woodmark requests that the following applicable section of their operating permit be changed as follows for the waste-solvent recovery still (Emission Point E11)

12.0 Waste-Solvent Recovery Still [emission point ID: E11]

12.1. Limitations and Standards

12.1.1. Use of the waste-solvent recovery (PR-SS2) still shall be in accordance with the following requirements:

- a. The still shall be maintained and operated as a closed system with no direct exhaust of emissions to the atmosphere and cleaning and maintenance of the still shall be performed in such a manner so as to limit the fugitive escape of solvent vapors to 5% or less of the total amount of solvent processed through the still.
- b. Maximum VOC and HAP emissions from the still shall be calculated at a 5% loss rate of the total solvent throughput over any given period of time.
- c. Maximum throughput of the still shall not exceed ~~14,980~~ **44,940** gallons per year and no solvent shall be processed through the still with greater than 7.17 lb-VOC/gallon or 7.17 lb-HAP/gallon.
- d. VOC and HAP emissions from the still shall not exceed ~~2.69~~ **5.37** tons/year and shall count toward the facility-wide VOC limit given under 3.1.12.

[45CSR13, R13-2571, 4.1.60.]

12.2. Monitoring Requirements

12.3.1. Reserved.

12.3. Testing Requirements

12.3.1. Reserved.

12.4. Recordkeeping Requirements

12.4.1. Refer to permit conditions 3.4.11.a. through 3.4.11.e.

12.5. Reporting Requirements

12.5.1. Reserved.

12.6. Compliance Plan

12.6.1. Reserved.

ATTACHMENT E

Plot Plan

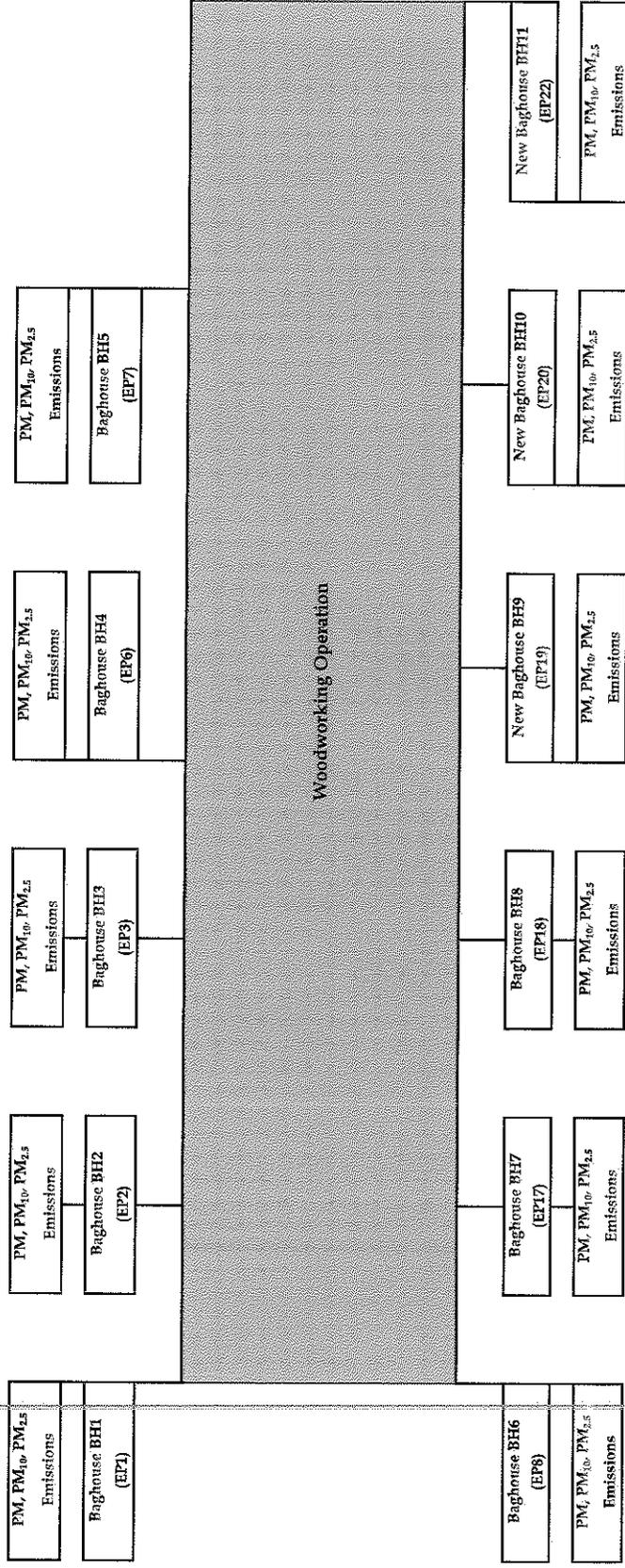
REDACTED COPY - CLAIM OF CONFIDENTIALITY

ATTACHMENT F

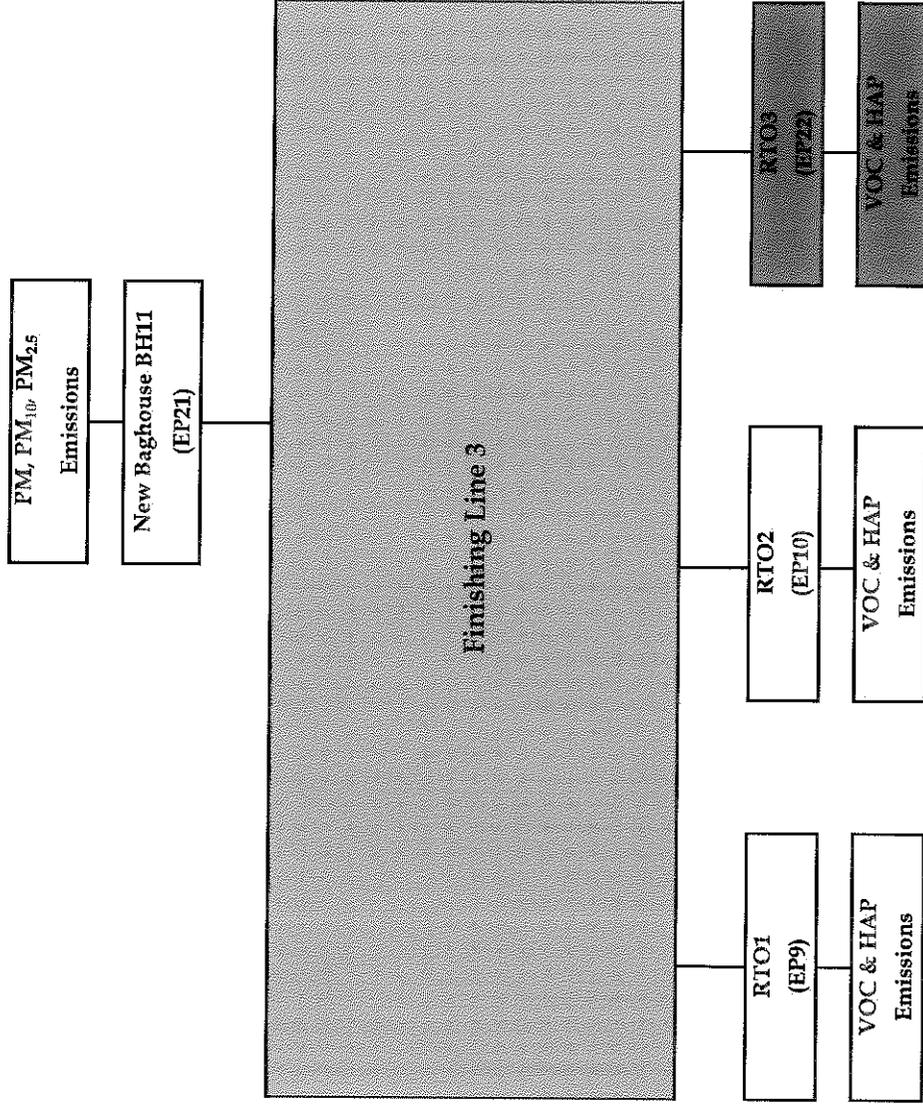
Process Flow Diagram



Woodworking Operation - Process Flow Diagram



Finishing Line 3 - Process Flow Diagram



ATTACHMENT G

Process Description

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REDACTED COPY - CLAIM OF CONFIDENTIALITY

[REDACTED]

[REDACTED]

[REDACTED]

American Woodmark is proposing increases of the hourly/annual throughput and emission limitations for the following operations:

1. Waste-Solvent Recovery Still (Emission Point E11)
2. Manual Spray Booth (Emission Point E12)

American Woodmark is requesting the manual spray booth (Emission Point E12) be included with the thermal oxidizers (Emission Points E9, E10 and E22) and not singled out in the permit as its own emission source as the VOC and HAP emission from the manual spray booth are controlled by the thermal oxidizers onsite and are not emitted directly from the manual spray booth.

ATTACHMENT H

Material Safety Data Sheets



AkzoNobel

Material Safety Data Sheet

Date of printing

: 1/7/2015.

Date of issue

: 1/7/2015

1. Product and company identification

Prepared for

ATTN:

AMERICAN WOODMARK
5300 EAST SIDE PARKWAY

GAS CITY, IN 46933 US

Prepared by

Akzo Nobel Coatings Inc.

2837 Roanoke Avenue S.W.

Roanoke, VA 24015-0627 US

(540) 982-8301

In case of emergency (Health or Spills):

CHEMTREC (US and Canada) (800) 424-9300

Product no. : 543-D6V-959

Product - Class : 93129 HONEY OAK BRUSH STAIN GC

Customer Part Number : 93129

Customer ShipTo ID : 0000103497

2. Hazards identification

Physical state : Liquid.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : DANGER!

FLAMMABLE LIQUID AND VAPOR. CAUSES EYE AND SKIN BURNS. HARMFUL IF SWALLOWED. CAUSES RESPIRATORY TRACT IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. POSSIBLE CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER, BASED ON ANIMAL DATA.

Keep away from heat, sparks and flame. Do not breathe vapor or mist. Do not ingest. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation : Irritating to respiratory system.

Other effects of inhalation may include: blood effects, CNS effects, decreased blood pressure, depression, diarrhea, dizziness, drowsiness, excitation, fatigue, headache, incoordination, kidney damage, liver damage, nausea, vomiting, weakness,

Ingestion : Harmful if swallowed. May cause burns to mouth, throat and stomach.

Other effects of ingestion may include : abdominal pain, blood effects, CNS effects, diarrhea, dizziness, drowsiness, fatigue, gastric disturbances, headache, incoordination, irritation, kidney damage, liver damage, nausea, vomiting, weakness,

Skin : Corrosive to the skin. Causes burns. Harmful in contact with skin.

Other effects of skin contact may include: dehydration, dermatitis, discoloration,

2. Hazards identification

Effects due to absorption through skin may include: blood effects, CNS effects, decreased blood pressure, diarrhea, dizziness, drowsiness, fatigue, headache, incoordination, kidney damage, liver damage, nausea, vomiting, weakness,

Eyes : Corrosive to eyes. Causes burns.

Other effects of eye contact may include : blindness, burning, eye damage, redness, swelling, tearing,

Potential chronic health effects

Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Target organs : Contains material which may cause damage to the following organs: blood, kidneys, liver, upper respiratory tract, skin, central nervous system (CNS).

Medical conditions aggravated by over-exposure : skin disorders, liver conditions, kidney conditions, respiratory conditions, cardiovascular diseases, anemia,

NOTICE: Reports have associated repeated and prolonged OVEREXPOSURE to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents of this package may be harmful or fatal.

See toxicological information (Section 11)

3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>% by weight</u>	<u>Vapor pressure</u>	<u>Exposure limits</u>
4-hydroxy-4-methyl-2-pentanone	123-42-2		0.11 kPa (0.8 mm Hg) [room temperature]	ACGIH TLV (United States). TWA: 50 ppm 8 hours. OSHA PEL (United States). TWA: 50 ppm 8 hours.
1-propanol, 2-methyl-	78-83-1		1.2 kPa (9 mm Hg) [room temperature]	ACGIH TLV (United States). TWA: 50 ppm 8 hours. OSHA PEL (United States). TWA: 100 ppm 8 hours.
1-pentanol	71-41-0		0.21 kPa (1.6 mm Hg) [room temperature]	
n-butanol	71-36-3		0.73 kPa (5.5 mm Hg) [room temperature]	ACGIH TLV (United States). TWA: 20 ppm 8 hours. OSHA PEL (United States). TWA: 100 ppm 8 hours.
ethyl alcohol	64-17-5		5.9 kPa (44.6 mm Hg) [room temperature]	ACGIH TLV (United States). STEL: 1000 ppm 15 minutes. OSHA PEL (United States). TWA: 1000 ppm 8 hours.
proprietary	-		0.4 kPa (3 mm Hg) [room temperature]	
propan-2-ol	67-63-0		4.4 kPa (33 mm Hg) [room temperature]	ACGIH TLV (United States). TWA: 200 ppm 8 hours. STEL: 400 ppm 15 minutes. OSHA PEL (United States). TWA: 400 ppm 8 hours.
2-methoxy-1-methylethyl acetate	108-65-6		0.49 kPa (3.7 mm Hg) [room temperature]	

3. Composition/information on ingredients

titanium dioxide 13463-67-7 Not available.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Chemical burns must be treated promptly by a physician. Get medical attention immediately if symptoms occur.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Chemical burns must be treated promptly by a physician. Get medical attention immediately if symptoms occur.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. Fire-fighting measures

- Flammability of the product** : Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
- Flash point** : Closed cup: 12°C (53.6°F)
- Flammable limits** : Lower: 1.2%
Upper: 19%
- Extinguishing media**
- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
UNUSUAL FIRE HAZARDS: During emergency conditions, overexposure to products of combustion may cause a health hazard; symptoms may not be immediately apparent. Obtain medical attention.
- Special remarks on fire hazards** : Not available.

5. Fire-fighting measures

Special remarks on explosion hazards : Not available.

6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Do not enter confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. Store in approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection** Selection of personal protective equipment (PPE) is to be established by the employer performing a PPE hazard assessment. In the U.S.A, OSHA requires completion of a documented PPE hazard assessment as described in 29 CFR 1910.132.
- Respiratory** : Use properly fitted respiratory protection complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flattening should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other protection** : Not available.

9. Physical and chemical properties

- Physical state** : Liquid.
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Color** : Not available.
- Odor** : Not available.
- Taste** : Not available.
- Molecular weight** : Not applicable.
- Molecular formula** : Not applicable.
- pH** : Not available.
- Boiling/condensation point** : 75 to 172°C (167 to 341.6°F)
- Melting/freezing point** : Not available.

9. Physical and chemical properties

Critical temperature	: Not available.
Relative density	: 0.839
Vapor density	: Heavier than air
Volatility	: 98.36% (w/w)
Odor threshold	: Not available.
Evaporation rate	: Highest known value: Greater than 1. (ethyl alcohol) compared with butyl acetate
Viscosity	: Not available.
Ionicity (in water)	: Not available.
Dispersibility properties	: Not available.
Solubility	: Not available.

10. Stability and reactivity

Chemical stability	: The product is stable, under normal conditions of storage and use.
Hazardous polymerization	: Will not undergo hazardous polymerization.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Other Conditions to avoid: light, moisture, allow air blanket above liquid, drying out,
Materials to avoid	: Reactive or incompatible with the following materials: oxidizing materials, metals, acids and alkalis.
Hazardous decomposition products	: Not available.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-methoxy-1-methylethyl acetate propan-2-ol	LD50 Oral	Rat	8532 mg/kg	-
	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
	LC50 Inhalation Vapor	Rat	12000 ppm	8 hours
ethyl alcohol	LD50 Dermal	Rabbit	20000 mg/kg	-
	LD50 Oral	Rat	7060 mg/kg	-
	LC50 Inhalation Vapor	Rat	20000 ppm	10 hours
1-propanol, 2-methyl-	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
	LC50 Inhalation Vapor	Rat	19200 mg/m ³	4 hours
4-hydroxy-4-methyl-2-pentanone	LD50 Dermal	Rabbit	13500 mg/kg	-
	LD50 Oral	Rat	2520 mg/kg	-
proprietary 1-pentanol	LD50 Dermal	Rabbit	2867 mg/kg	-
	LD50 Dermal	Rabbit	2292 mg/kg	-
n-butanol	LD50 Oral	Rat	370 mg/kg	-
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	790 mg/kg	-
	LC50 Inhalation Vapor	Rat	8000 ppm	4 hours

Carcinogenicity

Product/ingredient name	IARC	NTP	OSHA
titanium dioxide	2B	-	-

11. Toxicological information**Mutagenicity**

Product/ingredient name
Not available.

Test

Experiment

Result

Teratogenicity

Product/ingredient name
Not available.

Result

Species

Dose

Exposure

12. Ecological information

Data available upon request.

13. Disposal considerations**Waste disposal**

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. Transport information

Note: Information contained in this section may vary from the actual shipping description depending on quantity in containers, mode of shipment and use of exemptions.

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1263	Paint RQ (1-propanol, 2-methyl-, n-butanol)	3	II		RQ: 29195.2lbs (13240.4kgs) [1-propanol, 2-methyl-] RQ: 35134.7lbs (15934.1kgs) [n-butanol]
TDG Classification	UN1263	Paint	3	II		-
IMDG Class	UN1263	Paint- Marine pollutant (ethyl alcohol)	3	II	 	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

14. Transport information

IATA-DGR Class	UN1263	Paint	3	II		The environmentally hazardous substance mark may appear if required by other transportation regulations.
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PG* : Packing group

15. Regulatory information**United States**

U.S. Federal regulations : **United States inventory (TSCA 8b)** : All components are listed or exempted.
(HAPS) Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

SARA 313

Form R - Reporting requirements	Product name : n-butanol	CAS number : 71-36-3	Concentration : 14.25
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SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

<u>Ingredient name</u>	<u>Cancer</u>	<u>Reproductive</u>	<u>No significant risk level</u>	<u>Maximum acceptable dosage level</u>
titanium dioxide	Yes.	No.	No.	No.
carbon black	Yes.	No.	No.	No.

Canada

Canada inventory : All components of this product are on the CEPA DSL inventory.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations**International lists**

Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

** All values in this section reported as percentage by weight, unless otherwise specified.

16. Other information

HMIS III - Hazardous Material Information System (U.S.A.)

Health	*	3
Flammability		3
Physical hazards		0
Personal protection		

16. Other information

Caution: HMIS III ® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risk, and 4 representing severe hazards or risk. Although HMIS III ® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS III ® ratings are to be used with a fully implemented HMIS III ® program. HMIS III ® is a registered mark of the National Paint & Coatings Association (NPCA).

The customer is responsible for determining the PPE code for this material.

Other special considerations : Not available.

Notice to reader

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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AkzoNobel

Material Safety Data Sheet

Date of printing : 1/7/2015.

Date of issue : 1/7/2015

1. Product and company identification

Prepared for

ATTN:

AMERICAN WOODMARK
5300 EAST SIDE PARKWAY

GAS CITY, IN 46933 US

Prepared by

Akzo Nobel Coatings Inc.
2837 Roanoke Avenue S.W.
Roanoke, VA 24015-0627 US

(540) 982-8301

In case of emergency (Health or Spills):
CHEMTREC (US and Canada) (800) 424-9300

Product no. : 480-X6-1948

Product - Class : BAND CLEANER

Customer Part Number : 93107

Customer ShipTo ID : 0000103497

2. Hazards identification

Physical state : Liquid.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : DANGER!

EXTREMELY FLAMMABLE LIQUID AND VAPOR. FLAMMABLE. VAPOR MAY CAUSE FLASH FIRE. CAUSES SEVERE SKIN IRRITATION. HARMFUL IF SWALLOWED. CAUSES EYE IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE RESPIRATORY TRACT IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. POSSIBLE BIRTH DEFECT HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE BIRTH DEFECTS, BASED ON ANIMAL DATA.

Keep away from heat, sparks and flame. Do not breathe vapor or mist. Do not ingest. Do not get in eyes. Avoid contact with skin and clothing. Avoid exposure during pregnancy. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation : Slightly irritating to the respiratory system.

Other effects of inhalation may include: blindness, blurred vision, CNS effects, confusion, cramps, cyanosis, diarrhea, dizziness, drowsiness, excitation, fatigue, headache, incoordination, irregular heartbeat, nausea, shortness of breath, vomiting, weakness,

Ingestion : Toxic if swallowed.

2. Hazards identification

Other effects of ingestion may include : abdominal pain, blindness, cardiovascular effects, CNS effects, cramps, cyanosis, diarrhea, dizziness, drowsiness, fatigue, gastric disturbances, gastroenteritis, headache, irritation, liver damage, nausea, vomiting, weakness,

Skin

: Harmful in contact with skin. Severely irritating to the skin.

Other effects of skin contact may include: dehydration, dermatitis, discoloration, Effects due to absorption through skin may include: CNS effects, cramps, cyanosis, diarrhea, dizziness, drowsiness, fatigue, headache, incoordination, kidney damage, nausea, vomiting, weakness,

Eyes

: Irritating to eyes.

Other effects of eye contact may include : redness, swelling, tearing,

Potential chronic health effects

Carcinogenicity

: No known significant effects or critical hazards.

Mutagenicity

: No known significant effects or critical hazards.

Teratogenicity

: Contains material which may cause birth defects, based on animal data.

Target organs

: Contains material which may cause damage to the following organs: kidneys, lungs, liver, heart, brain, eyes, central nervous system (CNS), ears.

Medical conditions aggravated by over-exposure

: pulmonary conditions, skin disorders, liver conditions, kidney conditions, respiratory conditions, neurological disorders, cardiovascular diseases, hearing disorders,

NOTICE: Reports have associated repeated and prolonged OVEREXPOSURE to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents of this package may be harmful or fatal.

See toxicological information (Section 11)

3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>% by weight</u>	<u>Vapor pressure</u>	<u>Exposure limits</u>
toluene	108-88-3		Not available.	ACGIH TLV (United States). TWA: 20 ppm 8 hours. OSHA PEL (United States). CEIL: 500 ppm TWA: 200 ppm 8 hours. STEL: 300 ppm 15 minutes.
butanone	78-93-3		Not available.	ACGIH TLV (United States). TWA: 200 ppm 8 hours. STEL: 300 ppm 15 minutes. OSHA PEL (United States). TWA: 200 ppm 8 hours.
methanol	67-56-1		13 kPa (97.68 mm Hg) [room temperature]	ACGIH TLV (United States). Absorbed through skin. TWA: 200 ppm 8 hours. STEL: 250 ppm 15 minutes. OSHA PEL (United States). TWA: 200 ppm 8 hours.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately if symptoms occur.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately if symptoms occur.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. Fire-fighting measures

- Flammability of the product** : Extremely flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
- Flash point** : Closed cup: -9°C (15.8°F)
- Flammable limits** : Lower: 1.2%
Upper: 36.5%
- Extinguishing media**
- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
UNUSUAL FIRE HAZARDS: During emergency conditions, overexposure to products of combustion may cause a health hazard; symptoms may not be immediately apparent. Obtain medical attention.
- Special remarks on fire hazards** : Not available.
- Special remarks on explosion hazards** : Not available.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up**
- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Do not enter confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

- Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection** Selection of personal protective equipment (PPE) is to be established by the employer performing a PPE hazard assessment. In the U.S.A, OSHA requires completion of a documented PPE hazard assessment as described in 29 CFR 1910.132.

8. Exposure controls/personal protection

- Respiratory** : Use properly fitted respiratory protection complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flattening should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other protection** : Not available.

9. Physical and chemical properties

- Physical state** : Liquid.
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Color** : Not available.
- Odor** : Not available.
- Taste** : Not available.
- Molecular weight** : Not applicable.
- Molecular formula** : Not applicable.
- pH** : Not available.
- Boiling/condensation point** : 65 to 111°C (149 to 231.8°F)
- Melting/freezing point** : Not available.
- Critical temperature** : Not available.
- Relative density** : 0.833
- Vapor density** : Heavier than air
- Volatility** : 100% (w/w)
- Odor threshold** : Not available.
- Evaporation rate** : Highest known value: Greater than 1. (toluene) compared with butyl acetate
- Viscosity** : Not available.

9. Physical and chemical properties

Ionicity (in water) : Not available.
 Dispersibility properties : Not available.
 Solubility : Not available.

10. Stability and reactivity

Chemical stability : The product is stable, under normal conditions of storage and use.
 Hazardous polymerization : Will not undergo hazardous polymerization.
 Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
 Other Conditions to avoid: light, moisture,
 Materials to avoid : Reactive or incompatible with the following materials: oxidizing materials, metals, acids and alkalis.
 Hazardous decomposition products : Not available.
 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
toluene	LD50 Dermal	Rabbit	12124 mg/kg	-
	LD50 Oral	Rat	636 mg/kg	-
	LC50 Inhalation Vapor	Rat	49000 mg/m ³	4 hours
butanone	LD50 Dermal	Rabbit	6480 mg/kg	-
	LD50 Oral	Rat	2300 mg/kg	-
	LC50 Inhalation Vapor	Rat	11700 mg/m ³	4 hours
methanol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-
	LC50 Inhalation Vapor	Rat	64000 ppm	4 hours

Carcinogenicity

Not available.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Not available.			

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
toluene	Positive - Unreported	Mammal - species unspecified	-	-
methanol	Positive - Unreported	Mammal - species unspecified	-	-

12. Ecological information

Data available upon request.

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. Transport information

Note: Information contained in this section may vary from the actual shipping description depending on quantity in containers, mode of shipment and use of exemptions.

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1263	Paint related material RQ (toluene, butanone)	3	II		RQ: 2178.4lbs (987.936kgs) [toluene] RQ: 13198.7lbs (5985.79kgs) [butanone]
TDG Classification	UN1263	Paint related material	3	II		-
IMDG Class	UN1263	Paint related material. Marine pollutant (toluene)	3	II	 	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
IATA-DGR Class	UN1263	Paint related material	3	II		The environmentally hazardous substance mark may appear if required by other transportation regulations.

PG* : Packing group

15. Regulatory information

United States

U.S. Federal regulations : **United States inventory (TSCA 8b)** : All components are listed or exempted.
(HAPS) Clean Air Act (CAA) 112 regulated toxic substances: toluene; methanol

SARA 313

Form R - Reporting requirements	Product name	CAS number	Concentration
	toluene	108-88-3	45.95
	methanol	67-56-1	16.12

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
toluene	No.	Yes.	No.	No.
methanol	No.	Yes.	No.	No.

Canada

Canada inventory : All components of this product are on the CEPA DSL inventory.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists :

- Australia inventory (AICS):** All components are listed or exempted.
- China inventory (IECSC):** All components are listed or exempted.
- Japan inventory:** All components are listed or exempted.
- Korea inventory:** All components are listed or exempted.
- Malaysia Inventory (EHS Register):** All components are listed or exempted.
- New Zealand Inventory of Chemicals (NZIoC):** All components are listed or exempted.
- Philippines inventory (PICCS):** All components are listed or exempted.
- Taiwan inventory (CSNN):** Not determined.

** All values in this section reported as percentage by weight, unless otherwise specified.

16. Other information

HMIS III ® Hazardous Material Information System (U.S.A.) :

Health	*	3
Flammability		3
Physical hazards		0
Personal protection		

Caution: HMIS III ® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risk, and 4 representing severe hazards or risk. Although HMIS III ® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS III ® ratings are to be used with a fully implemented HMIS III ® program. HMIS III ® is a registered mark of the National Paint & Coatings Association (NPCA).

The customer is responsible for determining the PPE code for this material.

Other special considerations : Not available.

Notice to reader

16. Other information

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

Brand names mentioned in this data sheet are trademarks of or are licensed to Akzo Nobel.



AkzoNobel

Material Safety Data Sheet

Date of printing : 10/17/2014.

Date of issue : 10/17/2014

1. Product and company identification

Prepared for

ATTN:

AMERICAN WOODMARK
5300 EAST SIDE PARKWAY

GAS CITY, IN 46933 US

Prepared by

Akzo Nobel Coatings Inc.

2837 Roanoke Avenue S.W.

Roanoke, VA 24015-0627 US

(540) 982-8301

In case of emergency (Health or Spills):

CHEMTREC (US and Canada) (800) 424-9300

Product no. : 973-D6V-823

Product - Class : LINEN UV TOP COAT

Customer Part Number : 924710

Customer ShipTo ID : 0000103497

2. Hazards identification

Physical state : Liquid.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : DANGER!

COMBUSTIBLE LIQUID AND VAPOR. CAUSES EYE BURNS. CAUSES SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE RESPIRATORY TRACT IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. POSSIBLE CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER, BASED ON ANIMAL DATA.

Keep away from heat, sparks and flame. Do not breathe vapor or mist. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation : Slightly irritating to the respiratory system.

Other effects of inhalation may include: cough, shortness of breath.

Ingestion : May cause burns to mouth, throat and stomach.

Skin : Harmful in contact with skin. Irritating to skin.

Other effects of skin contact may include: defatting, dehydration, dermatitis, sensitization, blistering,

Effects due to absorption through skin may include: CNS effects, cramps, diarrhea, incoordination,

Eyes : Corrosive to eyes. Causes burns.

2. Hazards identification

Other effects of eye contact may include : burning, eye damage, redness, swelling, tearing,

Potential chronic health effects

- Carcinogenicity** : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Target organs** : Contains material which may cause damage to the following organs: lungs, skin, eyes.

Medical conditions aggravated by over-exposure : pulmonary conditions, skin disorders,

See toxicological information (Section 11)

3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>% by weight</u>	<u>Vapor pressure</u>	<u>Exposure limits</u>
titanium dioxide	13463-67-7		Not available.	
proprietary	-		Not available.	
proprietary	-		Not available.	
proprietary	-		Not available.	
2-(2-ethoxyethoxy)ethyl acryla	7328-17-8		Not available.	
proprietary	-		Not available.	
synthetic amorphous silica	7631-86-9		Not available.	

ACGIH TLV (United States).
TWA: 10 mg/m³ 8 hours.
OSHA PEL (United States).
TWA: 80 mg/m³ 8 hours.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Chemical burns must be treated promptly by a physician. Get medical attention immediately if symptoms occur.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately if symptoms occur.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. Fire-fighting measures

- Flammability of the product** : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
- Flash point** : Closed cup: 87.78°C (190°F)
- Flammable limits** : Not available.
- Extinguishing media**
- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
halogenated compounds
metal oxide/oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
UNUSUAL FIRE HAZARDS: During emergency conditions, overexposure to products of combustion may cause a health hazard; symptoms may not be immediately apparent. Obtain medical attention.
- Special remarks on fire hazards** : Not available.
- Special remarks on explosion hazards** : Not available.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up**
- Small spill** : Stop leak if without risk. Move containers from spill area. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Do not enter confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

- Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection** Selection of personal protective equipment (PPE) is to be established by the employer performing a PPE hazard assessment. In the U.S.A, OSHA requires completion of a documented PPE hazard assessment as described in 29 CFR 1910.132.
- Respiratory** : Use properly fitted respiratory protection complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flattening should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

8. Exposure controls/personal protection

Skin	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other protection	: Not available.

9. Physical and chemical properties

Physical state	: Liquid.
Burning time	: Not applicable.
Burning rate	: Not applicable.
Color	: Not available.
Odor	: Not available.
Taste	: Not available.
Molecular weight	: Not applicable.
Molecular formula	: Not applicable.
pH	: Not available.
Boiling/condensation point	: 95 to 256°C (203 to 492.8°F)
Melting/freezing point	: Not available.
Critical temperature	: Not available.
Relative density	: 1.479
Vapor density	: Heavier than air
Volatility	: 1.54% (w/w)
Odor threshold	: Not available.
Evaporation rate	: Not available.
Viscosity	: Not available.
Ionicity (in water)	: Not available.
Dispersibility properties	: Not available.
Solubility	: Not available.

10. Stability and reactivity

Chemical stability	: The product is stable, under normal conditions of storage and use.
Hazardous polymerization	: Yes.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Other Conditions to avoid: temperatures above 120 degrees, freezing, light, moisture, storage under inert atmosphere, loss of dissolved air, avoid x-rays or uv radiation, loss polymerization inhibitors,
Materials to avoid	: Reactive or incompatible with the following materials: oxidizing materials, reducing materials, acids and alkalis.
Hazardous decomposition products	: Not available.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
proprietary	LD50 Oral	Rat	4600 mg/kg	-
synthetic amorphous silica	LD50 Dermal	Rabbit	7500 mg/kg	-
	LD50 Oral	Rat	3160 mg/kg	-

Carcinogenicity

Product/ingredient name	IARC	NTP	OSHA
titanium dioxide	2B	-	-

IARC has issued a notice that they will publish a monograph that lists titanium dioxide (TiO₂) as possibly carcinogenic to humans (Group 2B) by inhalation (based solely on animal data). Human epidemiology studies do not suggest an increased risk of cancer in humans for occupational exposure to titanium dioxide. According to the IARC summary on titanium dioxide, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as paint."

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Not available.			

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Not available.				

12. Ecological information

Data available upon request.

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. Transport information

Note: Information contained in this section may vary from the actual shipping description depending on quantity in containers, mode of shipment and use of exemptions.

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		
TDG Classification	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-

14. Transport information

IATA-DGR Class	Not regulated.	-	-	-	-
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PG* : Packing group

15. Regulatory information**United States**

U.S. Federal regulations : **United States inventory (TSCA 8b)** : All components are listed or exempted.
(HAPS) Clean Air Act (CAA) 112 regulated toxic substances: glycol ether; xylene, mixed isomers; cumene; toluene; 2-propenoic acid; hydroquinone; triphenylstibine; 2-(2-ethoxyethoxy)ethyl acryla; ethane-1,2-diol

SARA 313

Form R - Reporting requirements	Product name : 2-(2-ethoxyethoxy)ethyl acryla	CAS number : 7328-17-8	Concentration : 1.67
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SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
titanium dioxide	Yes.	No.	No.	No.
carbon black	Yes.	No.	No.	No.
toluene	No.	Yes.	No.	No.
cumene	Yes.	No.	No.	No.

Canada

Canada inventory : At least one component is not listed in DSL but all such components are listed in NDSL.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists : **Australia inventory (AICS):** Not determined.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: At least one component is not listed.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.
Taiwan inventory (CSNN): Not determined.

** All values in this section reported as percentage by weight, unless otherwise specified.

16. Other information

HMIS III @ Hazardous Material Information System (U.S.A.) :

Health	*	3
Flammability		2
Physical hazards		2
Personal protection		

16. Other information

Caution: HMIS III ® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risk, and 4 representing severe hazards or risk. Although HMIS III ® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS III ® ratings are to be used with a fully implemented HMIS III ® program. HMIS III ® is a registered mark of the National Paint & Coatings Association (NPCA).

The customer is responsible for determining the PPE code for this material.

Other special considerations : Not available.

Notice to reader

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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ATTACHMENT I

Emission Units Table

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ATTACHMENT J

Emission Points Data Summary Sheets



**Attachment J
EMISSION POINTS DATA SUMMARY SHEET**

Table 1: Emissions Data

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPs)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration (ppmv or mg/m ³) ⁷
		ID No.	Source	ID No.	Device Type	Short Term ² (hr/yr)	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
E19	Up Vertical Stack	Various		BH9	Bag-house	-	-	PM=PM ₁₀ =PM _{2.5}	4628.6	20273.1	4.63	20.27	Solid	EE	0.01 gr/dscf
E20	Up Vertical Stack	Various		BH10	Bag-house	-	-	PM=PM ₁₀ =PM _{2.5}	4628.6	20273.1	4.63	20.27	Solid	EE	0.01 gr/dscf
E21	Up Vertical Stack	Various		BH11	Bag-house	-	-	PM=PM ₁₀ =PM _{2.5}	4628.6	20273.1	4.63	20.27	Solid	EE	0.01 gr/dscf
E22	Up Vertical Stack	Various		RTO3	Thermal Oxidizer	-	-	VOC HAPs (See Attachment N for speciation of HAPs.)	430.59 64.3	1767.74 281.6	27.85 4.4	121.97 19.4	Gas/Vapor	O (Emission Factor)	

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

¹ Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

² Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

³ List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS₂, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, SO₃, all applicable Greenhouse Gases (including CO₂ and methane), etc. DO NOT LIST H₂, H₂O, N₂, O₂, and Noble Gases.

⁴ Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

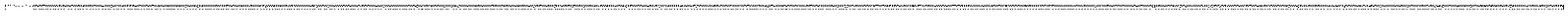
⁵ Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

⁶ Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

⁷ Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric)

ATTACHMENT K

Fugitive Emissions Data Summary Sheet



Attachment K

FUGITIVE EMISSIONS DATA SUMMARY SHEET

The FUGITIVE EMISSIONS SUMMARY SHEET provides a summation of fugitive emissions. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. Note that uncaptured process emissions are not typically considered to be fugitive, and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET.

Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions).

APPLICATION FORMS CHECKLIST - FUGITIVE EMISSIONS	
1.) Will there be haul road activities?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET.
2.) Will there be Storage Piles?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET.
3.) Will there be Liquid Loading/Unloading Operations?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.
4.) Will there be emissions of air pollutants from Wastewater Treatment Evaporation?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
5.) Will there be Equipment Leaks (e.g. leaks from pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, cooling towers, etc.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the LEAK SOURCE DATA SHEET section of the CHEMICAL PROCESSES EMISSIONS UNIT DATA SHEET.
6.) Will there be General Clean-up VOC Operations?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
7.) Will there be any other activities that generate fugitive emissions?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET or the most appropriate form.
If you answered "NO" to all of the items above, it is not necessary to complete the following table, "Fugitive Emissions Summary."	

FUGITIVE EMISSIONS SUMMARY		All Regulated Pollutants* Chemical Name/CAS # ¹	Maximum Potential Uncontrolled Emissions ²		Maximum Potential Controlled Emissions ³		Est. Method Used ⁴
			lb/hr	ton/yr	lb/hr	ton/yr	
Haul Road/Road Dust Emissions Paved Haul Roads							
Unpaved Haul Roads							
Storage Pile Emissions							
Loading/Unloading Operations							
Wastewater Treatment Evaporation & Operations							
Equipment Leaks			Does not apply		Does not apply		
General Clean-up VOC Emissions							
Other		Waste Solvent Still VOC Xylene - CAS # 1330-20-7	1.23	5.37	1.23	5.37	MB

¹ List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS₂, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, SO₃, all applicable Greenhouse Gases (including CO₂ and methane), etc. DO NOT LIST H₂, H₂O, N₂, O₂, and Noble Gases.

² Give rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

³ Give rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

⁴ Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

ATTACHMENT L

Emission Unit Data Sheets

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*):

<p>1. Name or type and model of proposed affected source:</p> <p>Woodworking Operation (Emission Points E19 and E20), controlled by baghouses BH9 and BH10 and Finishing Line 3 (Emission Point E21) controlled by baghouse BH 11.</p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p>N/A</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p>Wood Doors and Frames</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:</p> <p>None</p>

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):			
(a) Type and amount in appropriate units of fuel(s) to be burned:			
None			
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:			
N/A			
(c) Theoretical combustion air requirement (ACF/unit of fuel):			
N/A	@	°F and	psia.
(d) Percent excess air: N/A			
(e) Type and BTU/hr of burners and all other firing equipment planned to be used:			
N/A			
(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:			
N/A			
(g) Proposed maximum design heat input: N/A x 10 ⁶ BTU/hr.			
7. Projected operating schedule:			
Hours/Day	24	Days/Week	7
		Weeks/Year	50

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@	Ambient	°F and	Atmospheric	psia
a. NO _x		0 lb/hr	N/A	grains/ACF
b. SO ₂		0 lb/hr	N/A	grains/ACF
c. CO		0 lb/hr	N/A	grains/ACF
d. PM ₁₀		4.63 lb/hr	0.01	grains/ACF
e. Hydrocarbons		0 lb/hr	N/A	grains/ACF
f. VOCs		0 lb/hr	N/A	grains/ACF
g. Pb		0 lb/hr	N/A	grains/ACF
h. Specify other(s)		N/A lb/hr	N/A	grains/ACF
		lb/hr		grains/ACF
		lb/hr		grains/ACF
		lb/hr		grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
 Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING

Visible emissions notations once per month
 Pressure drop readings once per day

RECORDKEEPING

Records of visible emissions notations
 Records of daily pressure drop readings

REPORTING

None

TESTING

None

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

The baghouses will be maintained according to the manufacturer's specifications.

**Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL**

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*):

<p>1. Name or type and model of proposed affected source:</p> <p>Finishing Line 3 controlled by RTO3 (Emission Point E22).</p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p>N/A</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p>Wood Doors and Frames</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:</p> <p>None</p>

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):			
(a) Type and amount in appropriate units of fuel(s) to be burned:			
12 MMBtu per hour of natural gas for RTO3, plus miscellaneous insignificant natural gas sources (See Attachment N for more information).			
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:			
N/A			
(c) Theoretical combustion air requirement (ACF/unit of fuel):			
N/A	@	°F and	psia.
(d) Percent excess air: N/A			
(e) Type and BTU/hr of burners and all other firing equipment planned to be used:			
12 MMBtu per hour of natural gas for RTO3, plus miscellaneous insignificant natural gas sources (See Attachment N for more information).			
(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:			
N/A			
(g) Proposed maximum design heat input:		12	× 10 ⁶ BTU/hr.
7. Projected operating schedule:			
Hours/Day	20	Days/Week	6
		Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:					
@	Ambient	°F and		Atmospheric	psia
a.	NO _x	0	lb/hr	N/A	grains/ACF
b.	SO ₂	0	lb/hr	N/A	grains/ACF
c.	CO	0	lb/hr	N/A	grains/ACF
d.	PM ₁₀	0	lb/hr	N/A	grains/ACF
e.	Hydrocarbons	0	lb/hr	N/A	grains/ACF
f.	VOCs	23.5	lb/hr	N/A	grains/ACF
g.	Pb	0	lb/hr	N/A	grains/ACF
h.	Specify other(s)				
	HAPs (See Attachment N for breakout of each HAP)	4.42	lb/hr	N/A	grains/ACF
			lb/hr		grains/ACF
			lb/hr		grains/ACF
			lb/hr		grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
 Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING
 Three (3) hour rolling average combustion chamber temperature via a continuous recorder.
 Monitor daily average capture system pressure loss, as measure at the inlet.
 Monitor usage of all materials in emission tracking system.

RECORDKEEPING
 Maintain records of three (3) hour rolling average combustion chamber temp via a continuous recorder.
 Maintain daily average capture system pressure loss records.
 Maintain usage of all materials in an emission tracking system.

REPORTING
 None

TESTING
 None

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

RTO3 will be maintained according to the manufacturer's specifications.

**Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL**

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*):

<p>1. Name or type and model of proposed affected source:</p> <p>Waste Solvent Recovery Still (generates fugitive (non-stack) VOC and HAP (xylene) emissions). Thus, no emission points data sheet was completed for the waste solvent recovery still.</p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p>American Woodmark wishes to increase the hourly throughput of material by 3.42 gallons per hour for a total of 5.13 gallons per hour.</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p>70% of 3.42 gal/hr = 2.40 gallons xylene solvent recovered per hour</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:</p> <p>None</p>

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):			
(a) Type and amount in appropriate units of fuel(s) to be burned:			
None			
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:			
N/A			
(c) Theoretical combustion air requirement (ACF/unit of fuel):			
N/A	@	°F and	psia.
(d) Percent excess air: N/A			
(e) Type and BTU/hr of burners and all other firing equipment planned to be used:			
N/A			
(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:			
N/A			
(g) Proposed maximum design heat input:		N/A	× 10 ⁶ BTU/hr.
7. Projected operating schedule:			
Hours/Day	24	Days/Week	7
		Weeks/Year	50

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@	Ambient	°F and	Atmospheric	psia
a. NO _x		0 lb/hr	N/A	grains/ACF
b. SO ₂		0 lb/hr	N/A	grains/ACF
c. CO		0 lb/hr	N/A	grains/ACF
d. PM ₁₀		0 lb/hr	N/A	grains/ACF
e. Hydrocarbons		1.23 lb/hr	N/A	grains/ACF
f. VOCs		1.23 lb/hr	N/A	grains/ACF
g. Pb		0 lb/hr	N/A	grains/ACF
h. Specify other(s)				
	HAPs (Xylene)	1.23 lb/hr	N/A	grains/ACF
		lb/hr		grains/ACF
		lb/hr		grains/ACF
		lb/hr		grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
 Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

<p>MONITORING Amount of Waste Solvent treated each month (gallons) Amount of Solvent recovered each month (gallons) Amount of Waste Collected each month (gallons)</p>	<p>RECORDKEEPING Amount of Waste Solvent Treated each month (gallons) Amount of Solvent recovered each month (gallons) Amount of Waste Collected each month (gallons)</p>
--	---

<p>REPORTING None</p>	<p>TESTING None</p>
---	---

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

The waste solvent recovery still will be maintained according to the manufacturer's specifications, all waste (still bottoms) will be collected, placed in tightly closed properly labeled containers, and disposed of properly.

ATTACHMENT M

Air Pollution Control Sheets

Attachment M
Air Pollution Control Device Sheet
(AFTERBURNER SYSTEM)

Control Device ID No. (must match Emission Units Table): RTO3 (Emission Point E22)

Equipment Information

1. Manufacturer: MEGTEC Systems Model No. CleanSwitch 600-95		2. <input type="checkbox"/> Thermal Energy Recovery <input checked="" type="checkbox"/> Recuperative (Conventional) <input type="checkbox"/> Catalytic	
3. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.			
4. Combustion chamber dimensions: Length: 38.33 ft Diameter: ft Cross-sectional area: 847 ft ²		5. Stack Dimensions: Height: ft Diameter: ft	
6. Combustion (destruction) efficiency: Estimated: 98 % Minimum guaranteed: %		7. Retention or residence time of materials in combustion chamber: Maximum: sec Minimum: sec	
8. Throat diameter: ft		9. Combustion Chamber Volume: ft ³	
10. Fuel used in burners: <input checked="" type="checkbox"/> Natural Gas <input type="checkbox"/> Fuel Oil, Number: <input type="checkbox"/> Other, specify:		11. Burners per afterburner: Number of burners: 1 BTU/hr for burner: 12.4 MMBTU/HR BTU/hr	
12. Fuel heating value of natural gas: BTU/lb		13. Flow rate of natural gas: 206.38 ft ³ /min	
14. Is a catalyst material used?: <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, catalyst material used:		15. Expected frequency of catalyst replacement: yr(s)	
		16. Date catalyst was last replaced: Month/Year:	
17. Space Velocity of the catalyst material used: 1/hour		18. Catalyst area: ft ²	
		19. Volume of catalyst bed: ft ³	
20. Minimum loading: Maximum loading:		21. Temperature catalyst bed inlet: °F Temperature catalyst bed outlet: °F	
22. Explain degradation or performance indicator criteria determining catalyst replacement:			
23. Heat exchanger used? <input type="checkbox"/> Yes <input type="checkbox"/> No Describe heat exchanger:		24. Heat exchanger surface area? ft ²	
		25. Average thermal efficiency: %	
26. Temperature of gases: After preheat: °F		Before preheat: 125 max °F	
27. Dilution air flow rate: ft ³ /minute			
28. Describe method of gas mixing used:			

Waste Gas (Emission Stream) to be Burned

29.	Name	Quantity Grains of H ₂ S/100 ft ²	Quantity-Density (LB/hr, ft ³ /hr, etc)	Source of Material
30.	Estimate total combustibles to afterburner lb/hr or ACF/hr			
31.	Estimated total flow rate to afterburner or catalyst including materials to be burned, carrier gases, auxiliary fuel, etc.: lb/hr, ACF/hr, or scfm Total flow rate = Flue gas flow rate			
32.	Afterburner operating parameters:		During maximum operation of feeding unit(s)	During typical operation of feeding unit(s)
	Combustion chamber temperature in °F			
	Emission stream gas temperature in			
	Combined gas stream entering catalyst bed in			
	Flue stream leaving the catalyst bed			
	Emission stream flow rate (scfm)			
	Efficiency (VOC Reduction)		%	%
	Efficiency (Other; specify contaminant)		%	%
33.	Inlet Emission stream parameters:		Maximum	Typical
	Pressure (mmHg):			
	Heat Content (BTU/scf):			
	Oxygen Content (%):			
	Moisture Content (%):			
	Are halogenated organics present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	Are particulates present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	Are metals present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
34.	For thermal afterburners, is the combustion chamber temperature continuously monitored and recorded? <input type="checkbox"/> Yes <input type="checkbox"/> No			
35.	For catalytic afterburners, is the temperature rise across the catalyst bed continuously monitored and recorded? <input type="checkbox"/> Yes <input type="checkbox"/> No			
36.	Is the VOC concentration of exhaust monitored and recorded? <input type="checkbox"/> Yes <input type="checkbox"/> No			
37.	Describe any air pollution control device inlet and outlet gas conditioning processes (e.g. gas cooling, gas reheating, gas humidification):			
38.	Describe the collection material disposal system:			
39.	Have you included <i>Afterburner Control Device</i> in the Emissions Points Data Summary Sheet?			

40. Proposed Monitoring, Recordkeeping, Reporting, and Testing

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:

3 Hour rolling average combustion chamber temperature via a continuous recorder.

Monitor daily average capture system pressure loss, as measure at the inlet.

Monitor usage of all materials in emission tracking system.

RECORDKEEPING:

Maintain records of 3 hour rolling average combustion chamber temp. via a continuous recorder

Maintain daily average capture system pressure loss records.

Maintain usage of all materials in an emission tracking system.

REPORTING:

American Woodmark requests that no reporting be required.

TESTING:

American Woodmark requests that no testing be required.

MONITORING:

Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING:

Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING:

Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING:

Please describe any proposed emissions testing for this process equipment on air pollution control device.

41. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.

95%

42. Manufacturer's Guaranteed Control Efficiency for each air pollutant.

VOCs =98%

HAPs=98%

43. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

22. Type of Pollutant(s) to be collected (if particulate give specific type):
 PM, PM10, PM2.5

23. Is there any SO₃ in the emission stream? No Yes SO₃ content: _____ ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

Pollutant	IN		OUT	
	lb/hr	grains/acf	lb/hr	grains/acf
PM = PM10 = PM2.5 (Per Baghouse)	4620.34	1.00	4.63	0.01

25. Complete the table:

Particulate Size Range (microns)	Particle Size Distribution at Inlet to Collector	Fraction Efficiency of Collector
	Weight % for Size Range	Weight % for Size Range
0 – 2	See Above	
2 – 4		
4 – 6		
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?

- Continuous Opacity
- Pressure Drop
- Alarms-Audible to Process Operator
- Visual opacity readings, Frequency:
- Other, specify:

27. Describe any recording device and frequency of log entries:

28. Describe any filter seeding being performed:

N/A

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):

N/A

30. Describe the collection material disposal system:

31. Have you included **Baghouse Control Device** in the Emissions Points Data Summary Sheet?

32. Proposed Monitoring, Recordkeeping, Reporting, and Testing

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:

Visible emission notations once per month
Pressure drop readings once per day

RECORDKEEPING:

Records of visible emissions notations
Records of pressure drop readings

REPORTING:

None

TESTING:

None

MONITORING:

Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING:

Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING:

Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING:

Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.

99%

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.

PM = PM10 = PM2.5 = 99.9%

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

ATTACHMENT N

Supporting Emission Calculations

Attachment N: Emissions Calculations
Emission Summary

Company Name: American Woodmark Corporation
Source Address: 587 Robert C. Byrd Industrial Park Road, Moorefield, WV 26036
Permit Number: R-39-03100030-2011 (SMD1)

Emission Unit/Operation	Uncontrolled/Unlimited Potential to Emit Emissions in Tons/Year													
	PM ₁₀ (tons/yr)	PM _{2.5} (tons/yr)	SO ₂ (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	GHG/CO _{2e} (tons/yr)	Total HAPs (tons/yr)	Worst Single HAP (Toluene) (tons/yr)					
Finishing Line 3	84.6	84.6	-	-	1767.7	-	-	281.6	-	-	281.6	-	-	-
Thermal Oxidizer	0.10	0.40	0.03	5.28	0.28	4.42	6345	0.10	1.8E-04	-	-	-	-	
Woodworking*	60819.4	60819.4	-	-	-	-	-	-	-	-	-	-	-	
Recycle Still for Waste Solvent	-	-	-	-	5.37	-	-	5.37	-	-	5.37	-	-	
Inp. Natural Gas Combustion	0.03	0.14	0.011	1.80	0.10	1.51	2171	0.03	6.1E-05	-	-	-	-	
Total	60904.2	60904.6	0.042	7.08	1773.5	5.93	6516	287.1	273.2	287.1	190.3	190.3	190.3	

Emission Unit/Operation	Uncontrolled/Unlimited Actual Emissions in Tons/Year												
	PM ₁₀ (tons/yr)	PM _{2.5} (tons/yr)	SO ₂ (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	GHG/CO _{2e} (tons/yr)	Total HAPs (tons/yr)	Worst Single HAP (Toluene) (tons/yr)				
Finishing Line 3 (Actual Emissions)	48.4	48.4	-	-	1062.5	-	-	200.6	-	-	180.8	-	-
Thermal Oxidizer	0.10	0.40	0.03	5.28	0.28	4.42	6345	0.10	1.8E-04	-	-	-	-
Woodworking*	60819.4	60819.4	-	-	-	-	-	-	-	-	-	-	-
Recycle Still for Waste Solvent	-	-	-	-	5.37	-	-	5.37	-	-	5.37	-	-
Inp. Natural Gas Combustion	0.03	0.14	0.011	1.80	0.10	1.51	2171	0.03	6.1E-05	-	-	-	-
Total	60938.0	60938.4	0.042	7.08	1068.3	5.93	6516	206.1	206.1	206.1	190.3	190.3	190.3

Emission Unit/Operation	Unlimited Potential to Emit After Integral Controls for Woodworking* (tons/year)												
	PM ₁₀ (tons/yr)	PM _{2.5} (tons/yr)	SO ₂ (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	GHG/CO _{2e} (tons/yr)	Total HAPs (tons/yr)	Worst Single HAP (Toluene) (tons/yr)				
Finishing Line 3	0.08	0.08	-	-	1767.7	-	-	281.6	-	-	281.6	-	-
Thermal Oxidizer	0.10	0.40	0.03	5.28	0.28	4.42	6345	0.10	1.8E-04	-	-	-	-
Woodworking*	60.82	60.82	-	-	-	-	-	-	-	-	-	-	-
Recycle Still for Waste Solvent	-	-	-	-	5.37	-	-	5.37	-	-	5.37	-	-
Inp. Natural Gas Combustion	0.03	0.14	0.011	1.80	0.10	1.51	2171	0.03	6.1E-05	-	-	-	-
Total	61.0	61.4	0.042	7.08	1773.5	5.93	6516	287.1	273.2	287.1	190.3	190.3	190.3

Emission Unit/Operation	Unlimited Actual Emissions After Integral Controls for Woodworking* (tons/year)												
	PM ₁₀ (tons/yr)	PM _{2.5} (tons/yr)	SO ₂ (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	GHG/CO _{2e} (tons/yr)	Total HAPs (tons/yr)	Worst Single HAP (Toluene) (tons/yr)				
Finishing Line 3 (Actual Emissions)	0.08	0.08	-	-	121.87	-	-	19.4	-	-	18.5	-	-
Thermal Oxidizer	0.10	0.40	0.03	5.28	0.28	4.42	6345	0.10	1.8E-04	-	-	-	-
Woodworking*	60.82	60.82	-	-	-	-	-	-	-	-	-	-	-
Recycle Still for Waste Solvent	-	-	-	-	5.37	-	-	5.37	-	-	5.37	-	-
Inp. Natural Gas Combustion	0.03	0.14	0.011	1.80	0.10	1.51	2171	0.03	6.1E-05	-	-	-	-
Total	61.0	61.4	0.042	7.08	1068.3	5.93	6516	206.1	206.1	206.1	190.3	190.3	190.3

Emission Unit/Operation	Unlimited Potential to Emit After All Controls in (tons/year)												
	PM ₁₀ (tons/yr)	PM _{2.5} (tons/yr)	SO ₂ (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	GHG/CO _{2e} (tons/yr)	Total HAPs (tons/yr)	Worst Single HAP (Toluene) (tons/yr)				
Finishing Line 3 (Actual Emission)	0.08	0.08	-	-	121.87	-	-	19.4	-	-	18.5	-	-
Thermal Oxidizer	0.10	0.40	0.03	5.28	0.28	4.42	6345	0.10	1.8E-04	-	-	-	-
Woodworking*	60.82	60.82	-	-	-	-	-	-	-	-	-	-	-
Recycle Still for Waste Solvent	-	-	-	-	5.37	-	-	5.37	-	-	5.37	-	-
Inp. Natural Gas Combustion	0.03	0.14	0.011	1.80	0.10	1.51	2171	0.03	6.1E-05	-	-	-	-
Total	61.04	61.44	0.042	7.08	127.7	5.93	6516	24.9	24.9	24.9	19.3	19.3	19.3

Emission Unit/Operation	Unlimited Actual Emissions After All Controls in (tons/year)												
	PM ₁₀ (tons/yr)	PM _{2.5} (tons/yr)	SO ₂ (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	GHG/CO _{2e} (tons/yr)	Total HAPs (tons/yr)	Worst Single HAP (Toluene) (tons/yr)				
Finishing Line 3 (Actual Emission)	0.05	0.05	-	-	73.3	-	-	13.8	-	-	13.2	-	-
Thermal Oxidizer	0.10	0.40	0.03	5.28	0.28	4.42	6345	0.10	1.8E-04	-	-	-	-
Woodworking*	60.82	60.82	-	-	-	-	-	-	-	-	-	-	-
Recycle Still for Waste Solvent	-	-	-	-	5.37	-	-	5.37	-	-	5.37	-	-
Inp. Natural Gas Combustion	0.03	0.14	0.011	1.80	0.10	1.51	2171	0.03	6.1E-05	-	-	-	-
Total	61.00	61.40	0.042	7.08	79.1	5.93	6516	19.3	19.3	19.3	13.2	13.2	13.2

*In October of 1999 a Final Order Granting Summary Judgment was signed by an Administrative Law Judge ("ALJ") Granting summary judgment on an appeal filed by Kimball Hospitality Furniture Inc. (Cause Nos. 92-A-1-730 and 91-A-1483) related to the method by which DEW calculates emissions from woodworking operations. In his findings, the ALJ determined that particulate controls are necessary for the facility to produce its normal product and are integral to the normal operation of the facility, and therefore, potential emissions should be calculated after controls.

Attachment N: Emissions Calculations
PTE VOC and Particulate
From Surface Coating Operations

Company Name: American Woodmark Corporation
Source Address: 587 Robert C. Byrd Industrial Park Road, Moorsfield, WV 26836
Permit Number: R-30-0310030-2011 (SM01)

Spray Booth	Material	Density (lb/gal)	Weight % Volatile (H2O & Organics)	Weight % Water Organics	Weight % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency	
Finishing Line 3																	
Spray Booth 1 - Stain	93522 Honey Oak Dispersion	6.91	98.06%	0.0%	0.0%	1.14%	18.0	1.0	6.78	6.78	121.97	2927.21	534.22	2.64	594.38	75%	
	93107 Band Cleaner Dispersion	6.88	100.00%	0.0%	0.0%	0.00%	1.0	1.0	6.88	6.88	6.88	165.12	30.13	0.00	0.00	75%	
Spray Booth 2 - Stain	93522 Honey Oak Dispersion	6.91	98.06%	0.0%	0.0%	1.14%	18.0	1.0	6.78	6.78	121.97	2927.21	534.22	2.64	594.38	75%	
	93107 Band Cleaner	6.88	100.00%	0.0%	0.0%	0.00%	1.0	1.0	6.88	6.88	6.88	165.12	30.13	0.00	0.00	75%	
Spray Booth 3 - Top Coat	9305 HI Solids Topcoat	7.91	50.05%	0.0%	0.0%	44.36%	18.0	1.0	3.96	3.96	71.26	1710.27	312.12	77.88	8.92	75%	
	93107 Band Cleaner Dispersion	6.88	100.00%	0.0%	0.0%	0.00%	1.0	1.0	6.88	6.88	6.88	165.12	30.13	0.00	0.00	75%	
Manual Spray Booth	93522 Honey Oak Dispersion	6.91	98.06%	0.0%	0.0%	1.14%	10.0	1.0	6.78	6.78	67.76	1626.23	286.79	1.47	594.38	75%	
											403.59	9686.27	1787.74	84.83			
											403.59	9686.27	1787.74	0.08			
													121.97	0.08			
													VOC	PM10/PM2.5			

Finishing Line 3 Total before dry filters: 403.59
* Finishing Line 3 Total after dry filters: 1787.74

Finishing Line 3 Total after dry filters and thermal oxidizer: 121.97
* Finishing Line 3 Total after dry filters and thermal oxidizer: 1787.74

METHODOLOGY

* Particulate emissions after dry filters calculated using an efficiency of 99.8% for dry filters
VOC emissions after RTO calculated using a capture efficiency of 95% and a destruction efficiency of 98%
Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Potential VOC Pounds per Hour = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (1-Weight % Volatiles) * (1-Transfer efficiency) * (8760 hrs/yr) * (1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lb/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating * Sum of all solvents used

Attachment N: Emissions Calculations
 FTE HAP Emission Calculations

Company Name: American Woodmark Corporation
 Source Address: 587 Robert C. Byrd Industrial Park Road, Moorefield, WV 26836
 Permit Number: R-30-03100030-2011 (SM01)

Spray Booth	Material	Density (Lb/Gal)	Gallons of Material (gal/Unit)	Maximum (unit/hour)	Weight % Methyl Isobutyl Ketone (MIBK)	Weight % Ethylbenzene	Weight % Xylene	Weight % Formaldehyde	Weight % Methanol	Weight % Toluene	Methyl Isobutyl Ketone (MIBK) (ton/yr)	Ethylbenzene (ton/yr)	Xylene Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Methanol Emissions (ton/yr)	Toluene Emissions (ton/yr)
Finishing Line 1	83322 Honey Oak Dispersion	6.91	18.0	1.0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
	93107 Band Clean	6.99	1.0	1.0	0.00%	0.00%	0.00%	0.00%	0.00%	35.20%	0.00	0.00	0.00	0.00	4.16	10.61
	93107 Dispersion	6.91	18.0	1.0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Spray Booth 2 - Stain	83322 Honey Oak Dispersion	6.91	18.0	1.0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
	83045 Hi Solids Toner	7.91	18.0	1.0	0.00%	0.00%	0.18%	0.00%	0.00%	37.85%	0.00	0.00	1.12	0.12	0.00	266.04
Spray Booth 3 - Top Coat	83107 Band Clean	6.99	1.0	1.0	0.00%	0.00%	0.00%	0.00%	0.00%	35.20%	0.00	0.00	0.00	0.00	4.16	10.61
	83322 Honey Oak Dispersion	6.91	18.0	1.0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Manual Spray Booth																
Total Single HAPs for Finishing Line 3 =											0.50	0.00	1.12	0.12	12.48	267.66
Total Single HAPs After Control for Finishing Line 3 =											281.6	0.00	0.08	0.01	0.86	18.48
Total Combined HAPs After Control for Finishing Line 3 =											19.4	0.00	0.08	0.01	0.86	18.48

METHODOLOGY

HAPs Emissions (ton/yr) = Density (lb/gal) * Cal of Material (gal/Unit) * Maximum (unit/hr) * Weight % HAP * 0.000028 (ton/lb)
 Controlled HAPs Emission Rate (ton/yr) = Uncontrolled HAPs Emission Rate (ton/yr) * (1-0.83)

Attachment N: Emissions Calculations
 Limited VOC and Particulate Emissions
 From Surface Coating Operations

Company Name: American Woodmark Corporation
 Source Address: 587 Robert C. Byrd Industrial Park Road, Moorsfield, WV 26836
 Permit Number: R-30-03100039-2011 (SM01)

Spray Booth	Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	Ib VOC/gal solids
Finishing Line 3																
Spray Booth 1 - Stain	93322 Honey Oak Dispersion	6.91	98.06%	0.0%	98.06%	0.0%	1.14%	14.4	1.0	6.78	6.78	97.57	1951.47	304.43	1.51	594.38
	93107 Sand Cleaner	6.88	100.00%	0.0%	100.00%	0.0%	0.00%	1.0	1.0	6.88	6.88	6.88	137.60	21.47	0.00	0.00
Spray Booth 2 - Stain	93322 Honey Oak Dispersion	6.91	98.06%	0.0%	98.06%	0.0%	1.14%	14.4	1.0	6.78	6.78	97.57	1951.47	304.43	1.51	594.38
	93107 Sand Cleaner	6.88	100.00%	0.0%	100.00%	0.0%	0.00%	1.0	1.0	6.88	6.88	6.88	137.60	21.47	0.00	0.00
Spray Booth 3 - Top Coat	9305 HI Solids Topcoat	7.91	50.05%	0.0%	50.05%	0.0%	44.38%	14.4	1.0	3.96	3.96	57.01	1140.18	177.87	44.38	8.92
	93107 Sand Cleaner	6.88	100.00%	0.0%	100.00%	0.0%	0.00%	1.0	1.0	6.88	6.88	6.88	137.60	21.47	0.00	0.00
Manual Spray Booth	93322 Honey Oak Dispersion	6.91	98.06%	0.0%	98.06%	0.0%	1.14%	10.0	1.0	6.78	6.78	87.76	1355.19	211.41	1.05	594.38

Finishing Line 3 Total before dry filters: 6811.11
 *Finishing Line 3 Total after dry filters: 6811.11
 Finishing Line 3 Total after dry filters and thermal oxidizer: 73.31
 VOC 1062.53
 PM/PM10/PM2.5 0.048

METHODOLOGY

* Particulate emissions after dry filters calculated using an efficiency of 99.9% for dry filters
 VOC emissions after RTO calculated using a capture efficiency of 95% and a destruction efficiency of 98%
 Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics) / (1 - Volume % water)
 Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
 Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
 Potential VOC Pounds per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (20 hr/day)
 Particulate Potential Tons per Year = (units/hour) * (gal/unit) * Maximum (units/hr) * (6240 hrs/yr) * (1 ton/2000 lbs)
 Pounds VOC per Gallon of Solids = (Density (lb/gal) * (1 - Weight % Volatiles)) * (1 - Transfer efficiency) * (6420 hrs/yr) * (1 ton/2000 lbs)
 Total = Worst Coating + Sum of all solvents used

Attachment N: Emissions Calculations
 Limited HAP Emission Calculations

Company Name: American Woodmask Corporation
 Source Address: 897 Robert C. Byrd Industrial Park Road, Moorsfield, WY 28835
 Permit Number: R-30-03100030-2011 (SMD01)

Spray Booth	Material	Density (Lb/Gal)	Gallons of Material (gal/hr)	Maximum (unit/hour)	Weight % Methyl Isobutyl Ketone (MIBK)	Weight % Methyl Ethyl Ketone (MEK)	Weight % Ethylbenzene	Weight % Xylene	Weight % Formaldehyde	Weight % Methanol	Weight % Toluene	Methanol Emissions (lb/yr)	Formaldehyde Emissions (lb/yr)	Xylene Emissions (lb/yr)	Ethylbenzene Emissions (lb/yr)	Methyl Isobutyl Ketone (MIBK) Emissions (lb/yr)	Toluene Emissions (lb/yr)						
Finishing Line 1	S3322 Honey Oak Dispersion	6.91	18.0	1.0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00						
	93107 Band Cleaner	6.88	1.0	1.0	0.00%	0.00%	0.00%	0.00%	0.00%	13.89%	35.20%	2.95	0.00	0.00	0.00	0.00	7.55						
Spray Booth 2 - Stain	S3322 Honey Oak Dispersion	6.91	18.0	1.0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00						
	93107 Band Cleaner	6.88	1.0	1.0	0.00%	0.00%	0.00%	0.00%	0.00%	13.89%	35.20%	2.95	0.00	0.00	0.00	0.00	7.55						
Spray Booth 3 - Top Coat	8905 HI Solids Topcoat	7.91	18.0	1.0	0.00%	0.00%	0.00%	0.18%	0.02%	0.00%	37.85%	0.00	0.00	0.80	0.00	0.00	195.14						
	93107 Band Cleaner	6.88	1.0	1.0	0.00%	0.00%	0.00%	0.00%	0.00%	13.89%	35.20%	2.95	0.00	0.00	0.00	0.00	7.55						
Manual Spray Booth	S3322 Honey Oak Dispersion	6.91	10.0	1.0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00						
Total Single HAPs for Finishing Line 1 =												0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Single HAPs After Control for Finishing Line 1 =												205.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Combined HAPs After Control for Finishing Line 1 =												13.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

METHODOLOGY
 HAPS emission rate (lb/yr) = Density (lb/gal) * Maximum (unit/hr) * Weight % HAP * 5208 (hr/yr) * 1 ton/2000 lbs
 Controlled HAPs Emission Rate (tons/yr) = (uncontrolled HAPs Emission Rate (lb/yr)) * (4-0.83)

Company Name: American Woodmark Corporation
Source Address: 887 Robert C. Byrd Industrial Park Road, Mooresfield, WV 26836
Permit Number: R-30-03100030-2011 (SM01)

Process	Baghouse	Air Flow Rate (acfm/min)	Outlet Grain Loading (grain/ascf)	Control Efficiency (%)	Uncontrolled PM Emissions* (ton/yr)	Controlled PM Emissions** (ton/yr)	PM/PM10/PM2.5 (lb/hr)
Woodworking Operation Associated With Mill Operations	BH-9	54000	0.01	99.9%	20273.1	20.27	4.63
Woodworking Operation Associated With Mill Operations	BH-10	54000	0.01	99.9%	20273.1	20.27	4.63
Woodworking Operations Associated with Finishing System 3	BH-11	54000	0.01	99.9%	20273.1	20.27	4.63
Total:					60819.4	60.82	13.89

40.546286

Methodology

*Uncontrolled PM Emissions (ton/yr) = Air Flow Rate (acfm) * Outlet Grain Loading (gr/ascf) / 7000 (gr/lb) * 60 (min/hr) * 8760 (hr/yr) / 2000 (lb/ton) / (1 - Control Efficiency)

**Controlled PM Emissions (ton/yr) = Air Flow Rate (acfm) * Outlet Grain Loading (gr/ascf) / 7000 (gr/lb) * 60 (min/hr) * 8760 (hr/yr) / 2000 (lb/ton)

Attachment N: Emissions Calculations
 Recycle Still for Waste Solvent Emission Calculations

Company Name: American Woodmark Corporation
 Source Address: 587 Robert C. Byrd Industrial Park Road, Moorsfield, WV 26836
 Permit Number: R-30-03100030-2011 (SM01)

Process	Density of Xylene (lb/gal)	% VOC	% HAP	Projected Throughput (gal/hr)	Uncontrolled VOC Emissions (ton/yr)	Controlled VOC Emissions (ton/yr)	Worst Case Single HAP (ton/yr)	Combined HAP (ton/yr)
Recycle Still for Waste Solvent	7.17	100%	100%	3.42	5.37	5.37	5.37	5.37
Total:					5.37	5.37		

Methodology

The recycle still for waste solvent onsite is totally enclosed and only open 5% of the time. The worst case solvent used is xylene which is both a VOC and a HAP. The calculations above determine the potential VOC and HAP emit
 Tons VOC, HAP/yr = 53.42 gal/hr * 7.17 lb/gal * 1.00 (VOC/HAP) * 8760 hr/yr * 1 ton/2000 lb * 0.05 (frac. Fugitive)
 Worst case single HAP/yr and combined HAP/yr calculated as described above for Tons VOC/HAP/ yr.

Attachment N: Emissions Calculations
Natural Gas Combustion Only - Thermal Oxidizer
 MM BTU/HR <100

Company Name: American Woodmark Corporation
Source Address: 587 Robert C. Byrd Industrial Park Road, Mooresfield, WV 26836
Permit Number: R-30-03100030-2011 (SM01)

Heat Input Capacity
 CF/hr

12,000

Potential Throughput
 MMCF/yr

105.1

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Potential Emission in tons/yr	1.9	7.6	7.6	0.6	100 **see below	5.5	84
	0.10	0.40	0.40	0.03	5.26	0.29	4.42

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
 PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 6240 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 2 for HAPs emissions calculations.

Attachment N: Emissions Calculations
 Natural Gas Combustion Only - Thermal Oxidizer
 MM BTU/HR <100
 HAPs Emissions

Company Name: American Woodmark Corporation
 Source Address: 587 Robert C. Byrd Industrial Park Road, Mooresfield, WV 26836
 Permit Number: R-30-03100030-2011 (SM01)

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.1E-04	6.3E-05	3.9E-03	9.5E-02	1.8E-04

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	2.6E-05	5.8E-05	7.4E-05	2.0E-05	1.1E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.
 See Page 3 for Greenhouse Gas calculations.

Attachment N: Emissions Calculations
Natural Gas Combustion Only - Thermal Oxidizer
MM BTU/HR <100
Greenhouse Gas Emissions

Company Name: American Woodmark Corporation
Source Address: 587 Robert C. Byrd Industrial Park Road, Moorsfield, WV 26836
Permit Number: R-30-03100030-2011 (SM01)

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	6,307	0.12	0.12
Summed Potential Emissions in tons/yr	6,307		
CO2e Total in tons/yr	6,345		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
 $Emission (tons/yr) = Throughput (MMCF/yr) \times Emission Factor (lb/MMCF)/2,000 lb/ton$
 $CO2e (tons/yr) = CO2 Potential Emission ton/yr \times CO2 GWP (1) + CH4 Potential Emission ton/yr \times CH4 GWP (25) + N2O Potential Emission ton/yr \times N2O GWP (298)$.

Attachment N: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: American Woodmark Corporation
Source Address: 587 Robert C. Byrd Industrial Park Road, Mooresfield, WV 26836
Permit Number: R-30-03100030-2011 (SM01)

Equipment	Heat Input Capacity (MMBtu/hr)	Equipment	Heat Input Capacity (MMBtu/hr)	Equipment	Heat Input Capacity (MMBtu/hr)
AWC-029 Heat Exchanger 1 - Flash Zone	0.317	AWC-047 Heat Exchanger 1 - Flash Zone	0.317	AWC-057 Heat Exchanger 1 - Flash Zone	0.317
AWC-029 Heat Exchanger 2 - Cure Zone	0.516	AWC-047 Heat Exchanger 2 - Cure Zone	0.516	AWC-057 Heat Exchanger 2 - Cure Zone	0.516
AWC-032 High Velocity IR Oven	0.536	AWC-049 High Velocity IR Oven	0.536	AWC-059 High Velocity IR Oven	0.536
Total	4.11	Heat Input Capacity (MMBtu/hr)	36.0	Potential Throughput (MMCF/yr)	

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	direct PM2.5*	NOx	VOC	CO
	1.9	7.6	7.6	100 **see below	5.5	84
Potential Emission in tons/yr	3.42E-02	0.14	0.14	1.80	0.10	1.51

*PM emission factor is filterable PM only, PM10 emission factor is filterable and condensable PM10 combined.

PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 2 for HAPs emissions calculations.

Attachment N: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
HAPs Emissions

Company Name: American Woodmark Corporation
Source Address: 587 Robert C. Byrd Industrial Park Road, Mooresfield, WV 26836
Permit Number: R-30-03100030-2011 (SM01)

		HAPs - Organics			
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	3.8E-05	2.2E-05	1.3E-03	3.2E-02	6.1E-05
		HAPs - Metals			
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	9.0E-06	2.0E-05	2.5E-05	6.8E-06	3.8E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.
 See Page 3 for Greenhouse Gas calculations.

Attachment N: Emissions Calculations
 Natural Gas Combustion Only
 MMBTJ/HR <100
 Greenhouse Gas Emissions

Company Name: American Woodmark Corporation
 Source Address: 587 Robert C. Byrd Industrial Park Road, Mooresfield, WV 26836
 Permit Number: R-30-03100030-2011 (SM01)

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
120,000	2.3		2.2
Potential Emission in tons/yr	2,159	0.041	0.040
Summed Potential Emissions in tons/yr	2,159		
CO2e Total in tons/yr	2,171		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64. Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03. Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
 CO2e (tons/yr) = CO2 Potential Emission tons/yr x CO2 GWP (1) + CH4 Potential Emission tons/yr x CH4 GWP (25) + N2O Potential Emission tons/yr x N2O GWP (298).

ATTACHMENT Q

Monitoring, Recordkeeping, Reporting, and Testing Plans

Monitoring, Recordkeeping, Reporting, and Testing Plans

- a. **Emission Point E19 (Baghouse BH9):**
1. **Monitoring Plans:**
American Woodmark requests that the monitoring requirements be the same as the monitoring requirements established for the eight (8) existing woodworking baghouses;
 - A. Daily pressure drop readings; and
 - B. Monthly visible emissions notations.
 2. **Recordkeeping Plan:**
American Woodmark requests that the recordkeeping requirements be:
 - A. Maintain records of the daily pressure drop readings; and
 - B. Maintain records of the monthly visible emissions notations.
 3. **Reporting Requirements:**
American Woodmark requests that no reporting be required.
 4. **Testing Requirements:**
American Woodmark requests that no testing be required.
- b. **Emission Point E20 (Baghouse BH10):**
Since baghouses BH9 and BH10 are identical, American Woodmark requests that the monitoring, recordkeeping, reporting and testing be the same as is proposed for Emission Point E19 above.
- c. **Emission Point E22 (RTO3):**
1. **Monitoring Plans:**
American Woodmark requests that the monitoring requirements be the same as the monitoring requirements established for the two (2) existing RTOs;
 - A. Three (3) hour rolling average combustion chamber temperature via a continuous recorder.
 - B. Monitor daily average capture system pressure loss, as measure at the inlet.
 - C. Monitor usage of all materials in emission tracking system
 2. **Recordkeeping Requirements:**
American Woodmark requests that the recordkeeping be:
 - A. Maintain records of three (3) hour rolling average combustion chamber temp via a continuous recorder.
 - B. Maintain daily average capture system pressure loss records.
 - C. Maintain usage of all materials in an emission tracking system.

- 3. Reporting Requirements:**
American Woodmark requests that no reporting be required.
- 4. Testing Requirements:**
American Woodmark requests that no testing be required.

ATTACHMENT P

**Class I Legal Advertisement (Public Notice Letter) and
Affidavit of Public Notification**

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that American Woodmark Corporation, South Branch, a manufacturer of wood doors and frames for finished kitchen and vanity cabinets, has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Title V Permit Revision to allow the construction of a woodworking operation, with particulate matter emissions controlled by two (2) new baghouses (BH9 and BH10) and existing baghouses BH1, BH2, BH3, BH4, BH5, BH6, BH7 and BH8; construction of Finishing Line 3, with volatile organic compounds (VOC) and hazardous air pollutants (HAPs) emissions controlled by a thermal oxidizer (RTO3); two (2) electric powered air compressors; and an increase in the annual throughput of the waste solvent recovery still and manual spray booth located onsite. The proposed equipment are to be located at the American Woodmark Corporation, South Branch facility located on 587 Robert C. Byrd Industrial Park Road, Moorefield, WV 26836, in Hardy County, West Virginia.

The applicant estimates the increased potential discharge of the following regulated air pollutants will be 61.00, 61.40, and 61.40 tons per year of Particulate Matter (PM), PM₁₀, and PM_{2.5}, respectively, after application of emission controls, and 79.1 and 19.3 tons volatile organic compounds (VOC) and hazardous air pollutants (HAPs) per year, respectively. American Woodmark will continue to comply with the existing VOC limits as written in the current permit R30-03100030-2011.

Startup of construction is planned to begin on or about the 1st day of June 2015. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality (DAQ), 601 57th Street, SE, Charleston, WV 25304, for at least thirty (30) calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1227, during normal business hours.

Dated this the 3rd day of February, 2015.

By: American Woodmark Corporation, South Branch
Mr. Todd Regula, CSP
Corporate EHS Manager
American Woodmark Corporation
3102 Shawnee Drive
Winchester, VA 22601

AFFIDAVIT OF PUBLICATON
County of Hardy, to wit:

Cost of Publication \$47.61

I, Phoebe Fisher Heishman, being first sworn upon my oath, do depose and say that I am President of the R. E. Fisher Company, a corporation, and publisher of the newspaper entitled THE MOOREFIELD EXAMINER, a Democratic newspaper; that I have been duly authorized by the Board of Directors of such corporation to execute all affidavits of publication; that such newspaper has been published for more than one year prior to publication of the annexed notice described below; that such newspaper is regularly published twice weekly on Wednesdays and Saturdays, for at least fifty weeks during a calendar year, in the municipality of Moorefield, Hardy County, West Virginia; that such newspaper is a newspaper of "general circulation," as that term is defined in article three, chapter fifty-nine of the Code of West Virginia, 1931, as amended within the publication area or areas of aforesaid municipality and county; that such newspaper averages in length four or more pages, exclusive of any cover, per issue; that such newspaper is circulated to the general public at a definite price or consideration; that such newspaper is a newspaper to which the general public resorts for passing events of a political, religious, commercial, and social nature, and for current happenings, announcements, miscellaneous reading matters, that the annexed

Notice of Air Quality Permit--American Woodmark South Branch Plant

was duly published in said newspaper once a week for 1 successive

weeks, commencing with the issue of 28th day of January 2015,

and ending with the issue of the 28th day of January, 2015,

and was posted at the N/A on the _____ day of _____, 20_____.

/s/ Phoebe Fisher Heishman
Phoebe Fisher Heishman, Publisher
The Moorefield Examiner

Taken, subscribed and sworn to before me in my said county this 28th day of
January, 2015.

My commission expires June 19, 2019

/s/ Kathryn O. Babo
Notary Public of Hardy County, WV

AIR QUALITY PERMIT NOTICE

Notice of Application

Notice is given that American Woodmark Corporation, South Branch, a manufacturer of wood doors and frames for finished kitchen and vanity cabinets, has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Title V Permit Revision to allow the construction of a woodworking operation, with particulate matter emissions controlled by two (2) new baghouses (BH9 and BH10) and existing baghouses BH1, BH2, BH3, BH4, BH5, BH6, BH7 and BH8; construction of Finishing Line 3, with volatile organic compounds (VOC) and hazardous air pollutants (HAPs) emissions controlled by a thermal oxidizer (TIO3); two (2) electric powered air compressors; and an increase in the annual throughput of the waste solvent recovery still and manual spray booth located onsite. The proposed equipment are to be located at the American Woodmark Corporation, South Branch facility located on 587 Robert C. Byrd Industrial Park Road, Moorefield, WV 26836, in Hardy County, West Virginia.

The applicant estimates the increased potential discharge of the following regulated air pollutants will be 66.39, 66.39, and 66.39 tons per year of Particulate Matter (PM), PM10, and PM2.5, respectively, after application of emission controls, and 41.0 and 11.1 tons volatile organic compounds (VOC) and hazardous air pollutants (HAPs) per year, respectively. American Woodmark will continue to comply with the existing VOC limits as written in the current permit R30-03100030-2011.

Startup of construction is planned to begin on or about the 1st day of June 2015. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality (DAQ), 601 57th Street, SE, Charleston, WV 25304, for at least thirty (30) calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1227, during normal business hours.

Dated this the 23rd day of January, 2015.

By: American Woodmark Corporation,
South Branch
Mr. Todd Regula, CSP
Corporate EHS Manager
American Woodmark Corporation
3192 Shawnee Drive
Winchester, VA 22601

ATTACHMENT Q

Business Confidential Claims

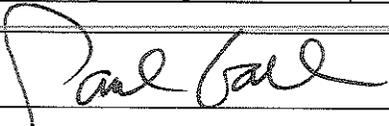
**Cover Document
Confidential Information**

**Application for NSR Permit and Title V Permit Revision
American Woodmark Corporation, South Branch
Moorefield, West Virginia
August Mack Project Number JO1413.253**

Company Name	American Woodmark Corporation, South Branch	Responsible Official		
Company Address	587 Robert C. Byrd Industrial Park Road, Moorefield, WV 26836	Confidential Information Designee in State of West Virginia	Name	Paul Gall
			Title	Plant Manager
Person/Title Submitting Confidential Information	Todd Regula		Address	587 Robert C. Byrd Industrial Park Road, Moorefield, WV 26836
	Corporate Environmental, Health, and Safety Manager		Phone	(304) 530-1100

Reason for Submittal of Confidential Information: The confidential information is being submitted as a part of the application for NSR Permit and Title V Permit revision.

Identification of Confidential Information	Rationale for Confidential Claim	Confidential Treatment Time Period
Attachment C - Installation and Start Up Schedule	Disclosure of the confidential information is likely to cause substantial harm to American Woodmark Corporation's competitive position.	Permanently
Attachment E - Plot Plan	Disclosure of the confidential information is likely to cause substantial harm to American Woodmark Corporation's competitive position.	Permanently
Attachment G - Process Description	Disclosure of the confidential information is likely to cause substantial harm to American Woodmark Corporation's competitive position.	Permanently
Attachment I - Emission Units Table	Disclosure of the confidential information is likely to cause substantial harm to American Woodmark Corporation's competitive position.	Permanently

Responsible Official Signature:	
Responsible Official Title:	Plant Manager
Date Signed:	2/4/15

ATTACHMENT R

Authority Forms

(Not required as a part of this submittal)

ATTACHMENT S

Title V Permit Revision Information

Attachment S

Title V Permit Revision Information

1. New Applicable Requirements Summary	
Mark all applicable requirements associated with the changes involved with this permit revision:	
<input type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input type="checkbox"/> Minor source NSR (45CSR13)	<input type="checkbox"/> PSD (45CSR14)
<input type="checkbox"/> NESHAP (45CSR15)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input type="checkbox"/> Section 111 NSPS (Subpart(s) _____)	<input type="checkbox"/> Section 112(d) MACT standards (Subpart(s) _____)
<input type="checkbox"/> Section 112(g) Case-by-case MACT	<input type="checkbox"/> 112(r) RMP
<input type="checkbox"/> Section 112(i) Early reduction of HAP	<input type="checkbox"/> Consumer/commercial prod. reqts., section 183(e)
<input type="checkbox"/> Section 129 Standards/Reqts.	<input type="checkbox"/> Stratospheric ozone (Title VI)
<input type="checkbox"/> Tank vessel reqt., section 183(f)	<input type="checkbox"/> Emissions cap 45CSR§30-2.6.1
<input type="checkbox"/> NAAQS, increments or visibility (temp. sources)	<input type="checkbox"/> 45CSR27 State enforceable only rule
<input type="checkbox"/> 45CSR4 State enforceable only rule	<input type="checkbox"/> Acid Rain (Title IV, 45CSR33)
<input type="checkbox"/> Emissions Trading and Banking (45CSR28)	<input checked="" type="checkbox"/> Compliance Assurance Monitoring (40CFR64) ⁽¹⁾
<input type="checkbox"/> NO _x Budget Trading Program Non-EGUs (45CSR1)	<input type="checkbox"/> NO _x Budget Trading Program EGUs (45CSR26)
<p>⁽¹⁾ If this box is checked, please include Compliance Assurance Monitoring (CAM) Form(s) for each Pollutants Specific Emission Unit (PSEU) (See Attachment H to Title V Application). If this box is not checked, please explain why Compliance Assurance Monitoring is not applicable:</p> <p style="margin-left: 20px;">Baghouse BH9 (Emission Point E19) Baghouse BH10 (Emission Point E20) Baghouse B11 (Emission Point E21) RTO3 (Emission Point E22)</p>	
2. Non Applicability Determinations	
List all requirements, which the source has determined not applicable to this permit revision and for which a permit shield is requested. The listing shall also include the rule citation and a rationale for the determination.	
<input type="checkbox"/> Permit Shield Requested <i>(not applicable to Minor Modifications)</i>	

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

3. Suggested Title V Draft Permit Language

Are there any changes involved with this Title V Permit revision outside of the scope of the NSR Permit revision? Yes No If Yes, describe the changes below.

Also, please provide **Suggested Title V Draft Permit language** for the proposed Title V Permit revision (including all applicable requirements associated with the permit revision and any associated monitoring /recordkeeping/ reporting requirements), OR attach a marked up pages of current Title V Permit. Please include appropriate citations (Permit or Consent Order number, condition number and/or rule citation (e.g. 45CSR§7-4.1)) for those requirements being added / revised.

See Attachment E

4. Active NSR Permits/Permit Determinations/Consent Orders Associated With This Permit Revision

Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
R30-03100030-2011	11/01/2011	
	/ /	

5. Inactive NSR Permits/Obsolete Permit or Consent Orders Conditions Associated With This Revision

Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
	/ /	
	/ /	

6. Change in Potential Emissions	
Pollutant	Change in Potential Emissions (+ or -), TPY
PM	+ 61.00 TPY
PM10 = PM2.5	+ 61.40 TPY
SOx	+ 0.042 TPY
NOx	+ 7.05 TPY
VOC	+ 79.1 TPY
CO	+ 5.93 TPY
GHG/CO2e	+ 8516 TPY
Total HAPs (Toluene & Xylene)	+ 19.3 TPY
Single Worst HAP (Toluene)	+ 13.2 TPY

7. Certification For Use Of Minor Modification Procedures (Required Only for Minor Modification Requests)

Note: This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete. The criteria for allowing the use of Minor Modification Procedures are as follows:

- i. Proposed changes do not violate any applicable requirement;
- ii. Proposed changes do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- iii. Proposed changes do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient air quality impacts, or a visibility increment analysis;
- iv. Proposed changes do not seek to establish or change a permit term or condition for which there is no underlying applicable requirement and which permit or condition has been used to avoid an applicable requirement to which the source would otherwise be subject (synthetic minor). Such terms and conditions include, but are not limited to a federally enforceable emissions cap used to avoid classification as a modification under any provision of Title I or any alternative emissions limit approved pursuant to regulations promulgated under § 112(j)(5) of the Clean Air Act;
- v. Proposed changes do not involve preconstruction review under Title I of the Clean Air Act or 45CSR14 and 45CSR19;
- vi. Proposed changes are not required under any rule of the Director to be processed as a significant modification;

Notwithstanding subparagraph 45CSR§30-6.5.a.1.A. (items i through vi above), minor permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in rules of the Director which are approved by the U.S. EPA as a part of the State Implementation Plan under the Clean Air Act, or which may be otherwise provided for in the Title V operating permit issued under 45CSR30.

Pursuant to 45CSR§30-6.5.a.2.C., the proposed modification contained herein meets the criteria for use of Minor permit modification procedures as set forth in Section 45CSR§30-6.5.a.1.A. The use of Minor permit modification procedures are hereby requested for processing of this application.

(Signed): Paul Gall Date: 2/4/15
 (Please use blue ink) (Please use blue ink)

Named (typed): PAUL GALL Title: PLANT MANAGER

Note: Please check if the following included (if applicable):

- Compliance Assurance Monitoring Form(s)
- Suggested Title V Draft Permit Language (See Attachment E)

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

ATTACHMENT H - Compliance Assurance Monitoring (CAM) Plan Form

For definitions and information about the CAM rule, please refer to 40 CFR Part 64. Additional information (including guidance documents) may also be found at <http://www.epa.gov/ttn/emc/cam.html>

CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to EACH regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet all of the following criteria (*If No, then the remainder of this form need not be completed*): YES NO

- a. The PSEU is located at a major source that is required to obtain a Title V permit;
- b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is NOT exempt;

LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
 - Stratospheric Ozone Protection Requirements.
 - Acid Rain Program Requirements.
 - Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
 - An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).
- c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;
 - d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; AND
 - e. The PSEU is NOT an exempt backup utility power emissions unit that is municipally-owned.

BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit:

- RENEWAL APPLICATION. ALL PSEUs for which a CAM plan has NOT yet been approved need to be addressed in this CAM plan submittal.
- INITIAL APPLICATION (submitted after 4/20/98). ONLY large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.
- SIGNIFICANT MODIFICATION TO LARGE PSEUs. ONLY large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, Only address the appropriate monitoring requirements affected by the significant modification.

3) BACKGROUND DATA AND INFORMATION

Complete the following table for all PSEUs that need to be addressed in this CAM plan submittal. This section is to be used to provide background data and information for each PSEU. In order to supplement the submittal requirements specified in 40 CFR §64.4. If additional space is needed, attach and label accordingly.

PSEU DESIGNATION	DESCRIPTION	POLLUTANT	CONTROL DEVICE	EMISSION LIMITATION or STANDARD	MONITORING REQUIREMENT
Baghouse BH9	WW Baghouse	PM, PM10, PM2.5	Baghouse	45 CSR7-4.1	Monthly visible emissions notations Daily pressure drop readings
Baghouse BH10	WW Baghouse	PM, PM10, PM2.5	Baghouse	45CSR7-4.1	Monthly visible emissions notations Daily pressure drop readings
Baghouse BH11	WW Baghouses Related to Finishing Line 3	PM, PM10, PM2.5	Baghouse	45CSR7-4.1	Monthly visible emissions notations Daily pressure drop readings
<u>EXAMPLE</u> Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c.; 9.0 lb/hr	Monitor pressure drop across multiclone; Weekly inspection of multiclone

^a If a control device is common to more than one PSEU, one monitoring plan may be submitted for the control device with the affected PSEUs identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a). If a single PSEU is controlled by more than one control device similar in design and operation, one monitoring plan for the applicable control devices may be submitted with the applicable control devices identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a).

^b Indicate the emission limitation or standard for any applicable requirement that constitutes an emission limitation, emission standard, or standard of performance (as defined in 40 CFR §64.1).

^c Indicate the monitoring requirements for the PSEU that are required by an applicable regulation or permit condition.

CAM MONITORING APPROACH CRITERIA

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for **EACH** indicator selected for **EACH** PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. If more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.

4a) PSEU Designation: BH9, BH10, and BH11	4b) Pollutant: PM, PM10, PM2.5	4c) ^a Indicator No. 1: Baghouse Pressure Drop	4d) ^a Indicator No. 2: Baghouse visible emissions
5a) GENERAL CRITERIA Describe the <u>MONITORING APPROACH</u> used to measure the indicators:		Daily pressure drop readings	Monthly visible emission notations
^b Establish the appropriate <u>INDICATOR RANGE</u> or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:		0.5" and 4.0" of water	Yes or No
5b) PERFORMANCE CRITERIA Provide the <u>SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA</u> , such as detector location, installation specifications, and minimum acceptable accuracy:		pressure gauge	observation
^c For new or modified monitoring equipment, provide <u>VERIFICATION PROCEDURES</u> , including manufacturer's recommendations, <u>TO CONFIRM THE OPERATIONAL STATUS</u> of the monitoring:		manufacturer's recommendations	employee training
Provide <u>QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES</u> that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):		maintain gauge according to manufacturer's specifications	employee training
^d Provide the <u>MONITORING FREQUENCY</u> :		Daily	Monthly
Provide the <u>DATA COLLECTION PROCEDURES</u> that will be used:		Daily records of observations	Monthly records of observations
Provide the <u>DATA AVERAGING PERIOD</u> for the purpose of determining whether an excursion or exceedance has occurred:		N/A	N/A

^a Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

^b Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

^c The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

^d Emission units with post-control PTE ≥ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

RATIONALE AND JUSTIFICATION

Complete this section for EACH PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:
Baghouse BH9
Baghouse BH10
Baghouse BH11

6b) Regulated Air Pollutant:
PM, PM10, PM2.5

7) **INDICATORS AND THE MONITORING APPROACH:** Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer's recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

Monitoring requirements proposed are the same as are required of the eight (8) existing baghouses.

8) **INDICATOR RANGES:** Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how EACH indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.
- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.
- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

RATIONALE AND JUSTIFICATION:

The pressure drop range proposed is the same as is required of the eight (8) existing baghouses.